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No. 1.

RAYFIELD LEAVES SWIFT.

F. Rayfield, head of Swift & Company's fertilizer department, will sever his connection with that company this month, and will engage in business for himself in Kansas City. His successor will be A. H. Pettit, who has been connected with the Swift fertilizer department for a long time, and is thoroughly posted in that department of the packing-house business.

A FIRST S. & S. DIVIDEND.

The Schwarzschild & Sulzberger Company has declared a dividend of \$1.25 per share, payable January 30 to stock of record January 16. Books will be closed from January 16 to January 30, both days inclusive. This is the first dividend ever declared by the company, although the stock has sold above par \$100 per share for years. The stock is now quoted on the market at \$150 bid. The capital stock is \$4,375,000.

MORRIS OPENING AT KANSAS CITY.

Tuesday was the day set for the opening of the magnificent new \$2,000,000 packing plant of Morris & Company at Kansas City. The plant in full operation will have a capacity of 1,500 cattle, 3,000 hogs and 2,000 sheep per day, and will employ 2,500 men. From the unusually deep concrete foundations, which protect the buildings against floods, to the roofs of the big factories, everything is of the newest and most modern type of packinghouse construction. The plant is a model.

BEEF FOR RUSSIAN ARMY.

Though Port Arthur has fallen, there are still several hundred thousand hungry Russian soldiers in the Far East without adequate food supplies, and the Siberian railroad is as badly blocked as ever. Recently Russian agents have attempted to relieve the food problem by heavier American shipments than ever before, in spite of the wiping out of the Russian fleet and increased danger of seizure of shipments by the Japanese. Early this week another Pacific liner, the Tacoma, left Seattle with 9,000 barrels of m-ss beef, consigned to Shanghai, but believed to be for the Russians at Vladivostock. Omaha packers filled this orders, and others like it.

MOODY JOINS YELLOW CHORUS

The brief of the government in the appeal of the packers to the United States Supreme Court from the decision of Judge Grosscup, of Chicago, in the 1902 injunction case was presented to the court on Wednesday. Attorney-General Moody is understood to have prepared the brief himself. His presentation of the government's side of the case appears to have been nothing more than a repetition of wholesale inaccurate statements repeatedly aired by the "yellow" press to the effect that packinghouse interests are in a combination which is in restraint of trade.

Those charges were threshed out months ago and proven absolutely without foundation. The yellowest of the sensational press was never able to substantiate a single one of its wild statements. The so-called Grosscup injunction case has lain dormant until now, and now President Roosevelt's attorney-general takes up the same old stale story and rehashes it for the Supreme Court.

The brief does not need an answer. It is easy for a distinguished lawyer to make statements and declare that they have been proven; to present actual proof is another matter. Talk of "conspiracy" and "facts known of all men" may carry more weight coming from a member of the President's cabinet than from the columns of a yellow journal, but it does not make actual flesh and blood of the demagogue's bugaboo of a "beef trust."

Among other highly eloquent passages in the attorney-general's brief were the following:

"It may be remarked that judges have differed as to the validity of aggregations of capital effected by some form of organic union between several smaller and competing corporations, and economists are far from agreeing that such aggregations, within limitations, are hurtful. So, too, associations of manufacturers to regulate competition within a restricted area have not always been condemned by courts, and have sometimes been approved by publicists. But has a responsible voice yet been heard to justify, legally or economically, a conspiracy or agreement between nearly all the producers of a commodity necessary to life, by which the confederates acquire absolute control and dominion over production, sale and distribution of that commodity throughout

the entire territory of a nation, with the power at will to raise price to the consumer of the finished product and lower prices to the producer of the raw material? Yet, such is that now at the bar of this court.

"That there is a conspiracy to control the market of the nation for fresh meats; that it does control it; and its control is merciless and oppressive, are facts known of all men. The broad question here is, 'Does the government's petition, with its statements of facts standing unchallenged, discover that conspiracy to the court?' We submit that it does, and that the decree of the Circuit Court should in all things be confirmed."

PRESIDENT SWIFT'S STATEMENT.

This is an extract from the address of President L. F. Swift, at the annual meeting of the stockholders of Swift & Company, held on Thursday at Chicago:

"It is needless for me to say to those present who are more or less familiar with the facts that the reports in circulation about the so-called 'beef trust' are without foundation. There is absolutely no conspiracy or combination to control either the purchase of livestock or the sale of meats or packinghouse products; on the other hand, the packing industry is subject to the severest kinds of competition, both in buying and selling, and the per cent of profit on sales in the packinghouse industry is less than in any other line of business."

In explanation of his statement, Mr. Swift later said: "All our purchases are made in the open market, where the freest competition exists, and all our sales are made in competition with a large number of other shippers. We are independent of them and they of us, and this talk of a 'beef trust' is baseless.

"Our annual reports indicate that Swift & Company's percentage of profit on sales turned over for the last year was 1½ per cent., which indicates that our entire business was done on a very small margin."

DOLD FIRE AT BUFFALO.

Fire in the lard refinery of the Jacob Dold Packing Company at the Buffalo, N. Y., plant did damage of from \$15,000 to \$20,000 on Saturday. The blaze, starting in the refinery, spread with great rapidity, and for a time the entire plant was threatened. The loss was fully covered by insurance.

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MEAT SITUATION IN GERMANY

American Imports of Hog Products Decimated by the Ridiculous German Law—People Opposed to Restrictions, but Politicians Want High Meat Prices—Shortage of Beef After March Is Predicted—Treaties in Prospect.

(Special Correspondence of The National Provisioner.)

Hamburg, Dec. 22, 1904.—Imports of hog products into Germany have decreased enormously since the new meat inspection law in Germany became effective, April 1, 1903, but it is not exclusively this law which has damaged the import of pork products from the United States so much as the fact that prices for German hogs dropped since the beginning of 1903 from 60 marks to 45 marks during the winter season of 1904-5. Prices for hogs in Germany went up during the spring of 1904 to 56 marks, and are now 52 marks, with occasionally 50 and 54 marks. These prices are 50 kilo live weight, from which about 20 to 23 per cent. are deducted, and the whole intestines belong to the buyer.

The high fees for the so-called inspection which foreign pork has to undergo when brought to the German custom houses, have mostly checked imports, and another paragraph in our meat law which demands that all pieces of meat shall weigh at least 4 kilo is also a great drawback to the importer, as the imports of all kinds of tongues, boneless hams, hog livers and picnic hams is directly prohibited by this clause of the German meat law. Any foreign pork may come into Germany and be brought to the meat inspection and custom houses without any certificate of inspection with the exception of pork from the United States, which must be accompanied with the certificate of microscopical inspection. Of course the import of pork from Mexico and Canada is still prohibited, as in 1883 there was issued an order in Germany prohibiting all imports of pork from North America, and only the United States has the right to bring pork into Germany since 1890 under certain conditions.

It is ridiculous that a certificate of microscopical inspection is asked by our German authorities, as every piece of foreign pork inspected microscopically costs 12c. for the microscopical inspection alone, besides the fees for a magroscopical inspection. Casings of all kinds have also to pay inspection fees when brought from foreign countries to Germany, but of course no microscopical inspection takes place.

Beef Shortage This Spring.

We expect a shortage of beef in Germany after March, 1905, as a great many unmatured cattle have been killed this winter. Not alone in Germany, but also in Scandinavia, on account of the shortage of feed, and therefore we expect that a good trade in beef cuts will take place later on.

Imports of beef casings from other continents, especially the Argentine, have increased enormously, otherwise prices for beef casings would be at least 20 per cent. higher than they are at present, and we think especially rounds are already high enough. Beef middles are bound to go lower, and larger sales of United States beef bungs will not take place, as the c. i. f. price of 22 pfennigs is still 30 to 40 per cent. over the price at which other beef bungs can be bought here on the spot, to be paid after receipt and inspection and net cash against bill of lading.

The consumption of casings of all kinds, and

consequently the imports, have never before been so large as in 1904 in Germany. There is a shortage in hog bungs, which probably will be over in January or February, as the warm weather we have had hitherto prevents the manufacturing of cervelat sausage, and most of our customers are very glad that they could not get the large supply of hog bungs which they otherwise would have needed.

Killings of pigs in Germany are very large, otherwise we suppose prices for domestic hogs would be 10 per cent. lower, but it is the effect of the meat inspection law in Germany which has brought about the present state of things. The Agrarians and the German government, which is under the influence of the Agrarian party, made the meat inspection law under the pretext to protect the health of the German people, but the intention was to have prices raised for all meats, and these efforts were not in vain.

Killings of bacon pigs for export in Denmark are 1,650,000 for 1904, but there will be a little decrease during 1905, as in several provinces of this little country a great many sows have been butchered. Anyhow, as 12 years ago killings in Denmark amounted only to 850,000 pigs and have now doubled, we are almost convinced that after ten years this little country will have weekly killings of 50,000 pigs; there are all possibilities for it.

Prices for pigs in Germany will not go up before May, 1905, but we expect them to be much higher during next summer, as the shortage of feed in Germany will make itself felt.

Depends on Commercial Treaties.

Very much depends on the commercial treaties which put new duties on everything probably after December 31, 1905, and it is expected that the commercial treaties which Germany now has closed with several countries and is about to close, will be published in the first half of January and proposed to the German parliament for passage. The prohibitive duties for meats which the Agrarians obtained in this new tariff will make all meat imports utterly impossible if the commercial treaties do not lower these duties considerably. The duty for salted meats is at present 17 marks per 100 kilo; the new tariff which was passed in 1902 raises the duty for meat with bones to 35 marks, and without bones, 42 marks per 100 kilo. We figure that in the commercial treaties with Russia and Austria it has been agreed that meat with bones will have to pay 25 marks, and without bones 30 marks, later on, but this we regard also as nearly prohibitive, as you must not forget that besides these duties the ridiculously high fees for the so-called meat inspection have to be paid.

As far as the free traders in our country say, and to these belong the writer of this letter, there exists a treaty between Germany and the United States that German products are allowed entrance into the United States at the lowest tariff against Germany permitting American products at the duties, which are fixed by the present German tariff, and that Germany has no right at all to increase the present duties for American products. unless Germany and the United States have

agreed to a commercial treaty. Hitherto the United States and Germany have regarded each other as most favored nations, but the peculiarity of the new German tariff will hardly permit this. On the other hand, we are under the impression that the United States would not stand such unjust treatment imposed by Germany.

The majority of the German people are opposed to the high duties and consequent difficulties for food products, although in the German parliament there is a majority for the Agrarian pretensions. We know that it is immaterial to the United States how high the duties are for American products in other countries, as the United States themselves are one of the most protectionistic and selfish countries in the world. But what will the United States do to protest against the injustice done them by all these Agrarian humbugs, such as meat inspection for casings, ridiculously high inspection fees, quarantining and vaccination of live cattle brought in for butchering purposes, etc.?

OLEO STEARINE TRADING.

It has been our custom at the end of each year to show the extent of the oleo stearine trading in New York, with its prices and comparative movements. The record of the business in it this last year is less than the exceptionally large volume of it in the previous year; nevertheless, it averages well up to that of most other seasons. Thus, while in the previous year fully 20,000,000 pounds of the stearine were bought in New York, because then of the exceptionally large business in compound lard in a season of high priced pure lard, yet this last year the buying of the stearine did not exceed 15,000,000 pounds, but which was well up to the degree of it in 1902, and in 1901. The highest price paid for the stearine this last year was 8½c., and as made in September and October, and the lowest price 5¼c., as made in April and May. Of the entire amount sold last year in New York fully 13,867,610 pounds were placed by Broker David C. Link.

NORTH

Have you ever stopped to think how great is the sum of money you are daily spending for power to turn all your line shafting, pulleys, bevel-gears and belts

Have you ever stopped to think how great is the sum of money you can daily save by electric drive using the most simple, compact, and economically operating motors—

NORTHERN MOTORS?
NORTHERN ELECT. MFG. CO.
MADISON, WIS. U.S.A.

NORTH

DOES FOOD SQUAD EAT AMID FILTH?

Spice is added to the discussion which at present rages around food preservatives through disclosures made this week by a correspondent of *The National Provisioner*, who makes some serious allegations concerning the conduct of the so-called food preservative tests by Chief Chemist Wiley, of the United States Bureau of Agriculture at Washington.

This correspondent alleges that the kitchen and dining room used by Dr. Wiley for his food test squad at Washington are in most unsanitary and unhygienic surroundings, and are maintained in a condition closely approaching upon that of filth. He describes the food furnished to the squad and the way in which it is served and eaten, and goes into detail concerning a visit which he made to the quarters of the squad upon a recent trip to Washington.

Dr. Wiley is now conducting experiments with various preservatives used in the preparation of foods and food products. He recently concluded his experiments with borax and boracic acid, and a synopsis of his conclusions from these experiments appeared at the time in *The National Provisioner*. This paper also published comments on his experiments and deductions from them made by both foreign and American critics. Full discussion of the subject has been postponed until Dr. Wiley's complete report should make its appearance.

The National Provisioner has not hesitated, however, to declare that Dr. Wiley's method of administering borax to his so-called "patients"—by means of gelatine capsules, rather than in the food given them—makes his experiments and his conclusions worthless so far as they have to do with the effect on the human system of borax as a food preservative. The method bore no resemblance whatever to actual conditions as they exist in the food trades, and any verdict arrived at by such means must be worthless, except to sustain theorists in preconceived prejudices.

However, the borax investigation was supposed to have been conducted under conditions which would have some scientific value. If it shall appear that the surroundings and the methods were the same during the borax tests as they are alleged to be at present, then Dr. Wiley's conclusions will be of no value to any one, not even the food faddists.

Borax as an Antidote.

Food prepared and served and eaten in the way and among the surroundings described by *The National Provisioner's* correspondent might well need some sort of preservative to counteract the depressing effects of Dr. Wiley's dining-room and kitchen. It is a high recommendation for borax, for instance, if it is shown that Wiley's "poison squad" members are in better health than ever after passing through such an ordeal for many months, with only capsules of powdered borax or boracic acid to serve as an antidote to the poisons of an unsanitary kitchen and an unhygienic dining-room.

Secretary Wilson and Dr. Wiley have not hesitated to give the authority of their names in an attempt to make the public believe that all food preservatives are poisons except the old-fashioned salt, sugar, vinegar

and wood-smoke. Will they say that these conclusions have been arrived at by means of tests made under conditions such as are described in the following communication?

The letter is as follows:

Condition of Wiley's Kitchen.

"The National Provisioner,
"New York.

"I have read the article which recently appeared in your paper about Professor Wiley's borax test being scored with great interest. Knowing you are an advocate for justice, and desirous of giving your many readers the truth instead of fiction, I thought you would be interested in knowing the condition and general surroundings of the kitchen and dining-room where Dr. Wiley made his experiments.

"I was in Washington recently, and, being of an inquisitive turn of mind, I visited the Bureau of Chemistry. I was unable to see Dr. Wiley, but I saw an employee, who informed me that the Professor sent him samples of preserved food, and he ate them for lunch and pronounced them excellent. I asked him what sanitarium the 'poison squad' were in. He replied that they were healthy and hearty, and did not have to go to a sanitarium.

"I asked him where the dining-room was that the 'dope squad' were using. They are called the 'dope squad' by the employees. He informed me it was in the basement, and apologized for the conditions existing in the stairway and hall.

"I descended the unsanitary stairway and soon landed in the basement. I saw a filthy refrigerator in the basement hall, opened it and found several samples of what was supposed to be butter thrown in the refrigerator promiscuously. A machine shop was on one side of the hall, the dining-room on the other. The air was laden with odors of chemicals, grease, etc. The hall was filled with boxes, bottles, barrels, etc.

"On entering the dining-room I found a room about 16 feet by 18 feet, ceiling about 9 feet high. Barrels of chemicals were lined up on one side of the room. There was a machine of some sort at the back end of the room; a table of boards on trestles on the other side. A desk was in the front part of the room, with several employees around it. There were two tables in the centre of the room; these are where the 'dope squad' partakes of the preserved foods.

Conducive to Indigestion.

"As it was about noon, I waited for the boys to come to their lunch. The tables were set. The lunch consisted of two halves of preserved peaches, soup, six slices of bread, butter, tea, coffee and milk. The bread was put on the table cloth. (Perhaps they were short of plates.) The boarders bolted their food, and washed the dry bread down with soup, milk, tea or coffee, which everyone knows is not conducive to the harmonious workings of the digestive apparatus.

"I was informed that one of the boarders had been eating preserved foods for scientific purposes for three years. I interviewed him, and he informed me he was in good condition. He also said the borax diet did not hurt the

boys; they all felt fine, and some of them had gained weight. And this was in spite of unsanitary surroundings sufficient to upset any but a good, strong stomach.

"On investigating the kitchen I found a room about the same size as the dining-room. It was a dark, gloomy room, four electric lights being burned there at noon. A gas range was used to prepare the meals. The floors in the basement are cement. The floor in the kitchen was not clean; there were odors of escaping gas, chemicals and oils.

"Taking in all the conditions, I certainly found them far from hygienic. Personally, I consider it a disgrace for the United States Government to conduct what are termed 'scientific experiments' in such a slovenly, unhygienic manner.

The Contrast at New Haven.

"Knowing that Professor Chittenden, of Yale University, had been making experiments to determine the smallest amount of food necessary to maintain health and strength under ordinary conditions of life, I also visited New Haven to note the conditions under which the experiments were made. Here I found a large, magnificent dining-room, capable of seating 1,400 persons; the ceiling 50 feet high at the side walls, and about 65 feet high in the centre of the room; the tables clean, neat and attractive; the air wholesome. The entire surroundings were pleasing to the eye. A number of the Yale professors are now dining at the tables Professor Chittenden used when experimenting with the men from the hospital corps of the United States Army.

"The contrast between Professor Chittenden's method of making his experiments and Dr. Wiley's is as great as day and night. It might be wise for Dr. Wiley to take a trip to New Haven and study scientific, hygienic surroundings. Professor Chittenden, by the way, claims that borax or boracic acid, when used as they are for preservative purposes, have a tendency to accelerate gastric juices, thereby aiding instead of retarding digestion. Professor Wiley claims they derange the entire functions.

"When professors disagree, how can the laity decide such questions? As a layman, knowing England has consumed boraxed foods for a quarter of a century, and is still a healthy nation, I must agree with Professor Chittenden and disagree with Dr. Wiley.

"Yours very truly,

"H. H. LANGDON.

"427 W. 22d St., New York."

S. & S. PLANT AT SIOUX CITY.

The Sioux City papers are stirred up over reports of more packing plants to follow the successful opening of the new Armour factory. They feel assured of a Swift plant at Sioux City during 1905, and the report that S. & S. intend to locate there refuses to down. The S. & S. officials decline either to affirm or deny the report.

PORTLAND MEAT PLANT BURNS.

The plant of the Union Meat Company, at Portland, Ore., was destroyed by fire on Wednesday. First estimates of the loss are placed at \$100,000. It is stated that the plant will be rebuilt at once.

PURE FOOD BILL SIDETRACKED

Loses Its Place on Senate Calendar and Is Not Likely to Get It Back—Federal License and Private Car Legislation at This Session of Congress—
A Political Hustler.

(From the Washington Bureau of The National Provisioner.)

Washington, D. C., Jan. 4.—Senator Heyburn, of Idaho, who as chairman of the Committee on Manufactures has charge of the so-called Pure Food bill, made what appeared to be a desperate effort when the Senate reassembled to-day at noon to keep the measure before that body, claiming that it was pending when the Senate went into executive session on December 16th, and ought, therefore, to have the right of way as unfinished business. Senator Perkins, of California, who had been designated by Senator Frye to act as president of the Senate during his absence, ruled Mr. Heyburn out of order, as Senator Beveridge had already asked the consent of the Senate to making the Statehood bill the unfinished business.

A close observer might have been inclined to be somewhat sceptical as to the entire sincerity of the Senator from Idaho in making his move in behalf of the so-called Pure Food bill, since it was quite evident that he permitted Mr. Beveridge to make his motion in regard to the Statehood bill in advance of his endeavor to obtain recognition for the purpose of inducing the Senate to continue its interrupted consideration of the so-called Pure Food bill.

Again, after the president pro tem. of the Senate had ruled against him, Mr. Heyburn made no further protest but voted himself to take up the Statehood bill. It is very true that what is known as the "steering committee" of the Senate has never given its sanction to the consideration of the Pure Food bill, but did on the other hand agree before Congress adjourned for the holidays to give place to the Statehood bill. Senator Heyburn says, however, that he has not given up the fight by any means, and has no intention of permitting his bill to be sidetracked permanently. He feels encouraged by the announcement that Dr. Wiley of the Agricultural Department has received "several communications" from various manufacturers of food products assuring him that during the present year they will cease to use coloring matter or any of the preservatives which the Bureau of Chemistry of that department claims to have found by actual tests and experiments to be harmful in any way.

The plans of the Administration for legislation affecting the railways and providing for Federal licenses for corporations dealing in interstate business do not seem to have made much headway during the Christmas holidays. On the reassembling of Congress to-day the general impression among members of both Houses is that there is little probability of any agreement along these lines being reached before the end of the session. The utmost that is to be expected is the passage of some bill through the House. Hearings on the Cooper bill are to be resumed in the House Committee on Interstate and Foreign Commerce on Friday, and it is possible that this measure may be reported in amended form.

Two measures were introduced in the Senate to-day, but it is not probable that either of them will receive serious consideration. Senator Newlands, of Nevada, introduced a joint resolution proposing to form a commission to frame a bill and report to Congress. The resolution outlines the character of the bill that Mr. Newlands would advocate, but his scheme is so radical and impracticable that it is not probable that it will receive much support. Senator Heyburn, of Idaho, introduced a rather crudely drawn bill for Federal licenses for interstate corporations.

Senator Newlands' resolution provides for a commission with instructions to frame and report to Congress a national incorporation act for the construction and consolidation of railroads employed in interstate commerce. The action proposed by the resolution, the Senator says, has nothing to do whatever with the recent suggestions of Commissioner Garfield, which, he said, simply covered the question of licenses to manufacturing corporations engaged in interstate commerce. Its purpose, he said, is to unify and simplify the railroad systems of the country, to place such systems under national control, to make the taxes fixed and certain, and to make dividends certain, so that hereafter any increase of business may tend mathematically either to a betterment of the roads, or an increase in wages, or a diminution in rates.

Under the provisions of the Heyburn bill no corporation would be permitted to engage in business in any State other than that in which it is incorporated, unless satisfactory proof is first submitted to the national board that such corporation is incorporated for legitimate purpose; that it is solvent; that it is not a party to any agreement to operate in restraint of trade or commerce, or which results in giving to it or any person or corporation engaged in like trade an unfair advantage over others; that it is not a party to any pooling plan which when carried into effect would create a monopoly of the trade or business in which such corporation or corporations are engaged; that no voting pool exists by which the full and free right to vote the stock of the corporation by the actual owners of such stock is abridged or prevented; that no part of the capital stock of such corporation shall be owned, controlled or voted by any other corporation.

Representative Stevens, of Minnesota, introduced in the House to-day a bill designed to carry out, in a general way, the recommendations of the Interstate Commerce Commission for the enactment of legislation for the regulation of private freight cars. The bill proposes to make the provisions of the laws relating to interstate commerce applicable to the owners and operators of private freight cars engaged in the transportation of property in interstate business. It provides for the filing of schedules by the owners and operators of such cars with the Interstate Commerce Commission at the same time and in the same manner as other sched-

ules are required to be filed, the schedules to give the mileage or per diem rates charged for the use of private cars. Separate schedules are required to be filed giving any charges for any facilities furnished or any service performed, or acts done as to or concerning any property transported on private freight cars whenever any additional charge shall be made over and above the scheduled rates for the transportation thereof.

The bill proposes to make discriminations of any kind in service or in charges for private cars unlawful. Reports are required to be filed showing the number of cars owned and operated, the amount of mileage and the rate of mileage or per diem charges, the charges for other services and the total earnings.

In the recently organized Department of Commerce and Labor, a bureau of manufactures was provided for in the first appropriation bill, but as there has been considerable difficulty in determining just what the business of such a bureau would be, both Secretaries Cortelyou and Metcalf have failed to make any attempt at inaugurating such a bureau. This being the case, some members of the House proposed to strike out the appropriation of \$4,000 for the salary of the Chief of the Bureau of Manufactures when the Legislative, Executive and Judicial appropriation bill was passed by the House on December 9th.

The discussion over this subject in Congress called attention to the fact that here was an opportunity for some business in the way of drawing a salary of \$4,000 at least, as the appropriation was finally made despite the opposition thereto, and as a consequence the nomination of Col. J. Hampton Moore, of Philadelphia, to the Chief of the Bureau of Manufactures of the Department of Commerce and Labor was to-day sent to the Senate. Just what his duties are to be it is impossible at present to learn, but it is stated on excellent authority that Col. Moore was very active in the last political campaign.

BRIGHTER MEAT CHANCES IN FRANCE.

In spite of the adverse legislation, which has already seriously affected the volume of the American meat trade with France, there seems to be a possibility that an opening may be found for this class of merchandise next spring and summer according to Consul-General Robert P. Skinner, Marseilles, France. Of late there has been a practically inexhaustible supply of domestic pork products, which have been offered at such ruinously low prices as to greatly discourage farmers, who are obliged to pay excessive prices for grain and other forms of food. The result has been a considerable killing off of domestic live stock, which has, probably, by no means been replaced. If this conjecture proves to be correct, American pork will have to be imported.

SEE THE LIST OF
BARGAINS
ON PAGE 48

STOCKS OF PROVISIONS

Following are official reports of the stocks of provisions on hand at various centers at the close of business on Dec. 31, 1904, compared with those of a year ago, as reported by the local Board of Trade:

CHICAGO.

	Dec. 31, 1904.	Dec. 31, 1903.
Mess pork, new made since Oct. 1, '04, bbl.	16,379	16,456
Mess pork, made Oct. 1, '03, to Oct. 1, '04.	22,418	381
Other kinds of barreled pork, bbls.	31,568	29,357
P. S. lard, made since Oct. 1, 1904, tcs.	33,687	8,847
P. S. lard, made Oct. 1, '03, to Oct. 1, '04.	12,909	1,489
Other kinds of lard.	19,350	9,633
S. R. middles, made since Oct. 1, '04, lbs.	13,622,557	11,524,944
S. R. middles, made previous to Oct. 1, 1904, lbs.	177,328	17,956,107
S. C. middles, lbs.	1,930,269	1,766,887
Extra S. C. middles, made since Oct. 1, 1904, lbs.	3,821,753	5,746,764
Extra S. C. middles, made previous to October 1, 1904, lbs.		1,186,928
Extra S. R. middles.	3,943,366	5,061,649
L. C. middles, lbs.	117,954	93,094
S. S. shoulders, lbs.	632,074	710,701
S. P. shoulders, lbs.	1,674,873	1,956,611
S. P. hams, lbs.	28,776,893	22,709,752
D. S. bellies, lbs.	10,367,269	13,017,294
S. P. bellies, lbs.	6,310,429	5,613,249
S. P. California or picnic hams, lbs.	11,134,705	6,908,430
S. P. Boston Shoulders, lbs.	11,134,705	1,187,220
S. P. skd. hams, lbs.	16,938,050	16,065,234
Other cuts of meats, lbs.	13,237,475	11,960,654
Total cut meats, lbs.	112,684,995	123,465,518

Movement of Products.

	Received.	Dec. 1904.	Dec. 1903.
Pork, bbls.	1,608		100
Lard, gross weight, lbs.	7,624,413		6,052,203
Meats, gross w'ght, lbs.	20,237,732		20,473,293
Live hogs, No.	875,738		953,397
Dressed hogs, No.	1,617		1,280
	Shipped.	Dec. 1904.	Dec. 1903.
Pork, bbls.	11,941		14,444
Lard, gross weight, lbs.	30,977,308		45,530,160
Meats, gross w'ght, lbs.	52,554,947		53,247,632
Live hogs, No.	103,106		107,175
Dressed hogs, No.	13,641		17,353
Average weight of hogs received December, 228; December, 1903, 220; December, 1902, 217 lbs.			

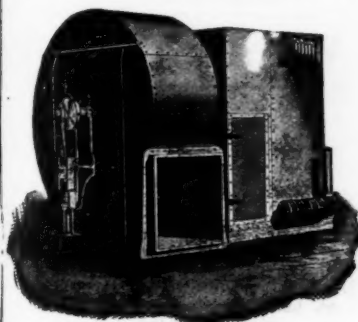
SOUTH OMAHA.

	Dec. 31, 1904.	Dec. 31, 1903.
Mess pork, bbls.	38	285
Other kinds bbl'd. pork.	885	1,116
P. S. lard "contract" tcs.	2,984	1,596
Other kinds lard, tcs.	1,929	1,532
S. R. middles, lbs.	4,835,437	2,848,342
S. C. middles, lbs.	1,350,271	672,858
Extra S. C. middles, lbs.	5,242,285	5,377,396
Extra S. R. middles, lbs.	550,577	881,504
L. C. middles, lbs.	71,940	32,361
D. S. shoulders, lbs.	717,784	232,429
S. P. shoulders, lbs.	485,367	282,095
S. P. hams, lbs.	8,424,665	6,150,503
D. S. bellies, lbs.	2,282,603	2,485,178
S. P. bellies, lbs.	1,820,193	1,238,313
S. P. California or picnic hams, lbs.	3,057,541	1,844,856
S. P. skd. hams, lbs.	939,558	4,458,213
Other cut meats, lbs.	2,404,566	1,379,077
Total cut meats, lbs.	36,182,787	27,833,123

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BEEF FARCE IN MONTANA

The attempt of the attorney-general of Montana to bar several prominent meat firms from doing business in that state, on the ground that they had formed a combination to fix prices and regulate trade, fell flat during the holiday season. The cases were dismissed by the state supreme court, but this did not discourage the attorney-general. He was going out of office on December 31, and he was anxious for a "last whack" at the common target of political demagogues. So he had the branch managers of the companies arrested on a criminal charge of conspiracy, and left the cases for his successor to struggle with.

The Montana supreme court refused to issue the injunctions asked for by Attorney-general Donovan against Armour & Company, Swift & Company, the Cudahy Packing Company and the Hammond Packing Company, on the ground that it had no jurisdiction in the matter. This was the contention of the attorneys for the packing concerns which the attorney-general sought to bar from doing any business in the state, and whose property he wanted to confiscate. The supreme court turned him down hard.

Determined to make some political capital for future use out of the case, Attorney-general Donovan, in the last hours of his term

of office, began suits against the same concerns under the criminal code. This is said to be the first time in the history of the United States where actions were brought against alleged trade combinations under the code. Suits were brought against Armour & Company, Swift & Company, Cudahy & Company, the Hammond Packing Company, of Chicago, and the Hammond Packing Company, of Pueblo, Colo., to prevent them from doing business in Montana.

Information charges the defendants with conspiracy in unlawfully combining to fix the price of certain articles of commerce for consumption by the people of Montana; that in pursuance of this conspiracy the defendants did actually carry out a restriction of trade in the sale of meats and meat products in this state by creating a monopoly in the sales of such articles. Upon the filing of the information warrants were issued for the arrest of the following representatives of the packing companies having headquarters at Butte: The Hammond Packing Company, of Chicago, W. H. Meloy; Armour & Company, J. Elliott; Swift & Company, H. G. Cuneo; Cudahy & Company, P. Walsh.

The agents were released on \$50 bonds, being required to appear in the district court at the January session.

Live Hogs.

	Dec., 1904.	Dec., 1903.
Received	213,883	217,068
Shipped	9,089	4,879
Driven out	204,682	212,693
Average weight	265	265

KANSAS CITY.

	Dec. 31, 1904.	Dec. 31, 1903.
Mess pork, bbls.	104	163
Other kinds pork, bbls.	1,926	1,455
P. S. lard contract, tcs.	1,415	477
Other kinds lard, tcs.	3,693	4,711
Short rib middles, lbs.	3,612,300	3,195,800
Short clear middles, lbs.	744,000	594,400
Extra S. C. middles, lbs.	4,256,000	1,892,700
Long clear middles, lbs.	68,500	34,700

Dry salt shoulders, lbs.	1,857,100	445,100
Dry salt bellies, lbs.	2,384,400	2,128,000
S. P. shoulders, lbs.	527,100	218,100
S. P. hams, lbs.	11,863,300	8,210,200
S. P. bellies, lbs.	2,715,000	1,955,400
S. P. Cal. ham, lbs.	3,412,800	1,495,900
S. P. skinned hams, lbs.	4,165,300	3,946,500
Other cut meats, lbs.	4,489,300	2,200,100

Total cut meats, lbs. 40,125,100 26,316,900

Live Hogs.

	December, 1904.	December, 1903.
Received	209,199	180,444
Shipped	5,118	911
Driven out	213,577	177,706
Average weight	194	220

(Continued on next page.)

TRADE GLEANINGS

The Moultrie Oil Mill, at Moultrie, Ga., was burned recently. E. S. Nace was the owner. Loss, \$10,000. It will be rebuilt at once.

Iowa Land and Cattle Company, of Letts, Ia., has been chartered. The capital is \$60,000, all paid in. The incorporators are William Lieberknecht, Louis Lieberknecht and A. K. Letts.

International Fertilizer Company, of Washington, D. C., has been incorporated with \$25,000 capital by R. A. Boyd, E. P. Morey, T. H. Walker, W. S. Boyd and R. A. Boyd, Jr.

Kopp Butchering Company, of Bozeman, Mont., has been incorporated by John Kopp, Sr., John Kopp, Jr., and Edward Engdohl, with \$25,000 capital. The business has been long established under the name of John Kopp & Son.

W. W. Darden Live Stock Company, of St. Louis, Mo., with \$30,000 capital, has been chartered. G. Lacy Crawford, John S. Leahy, A. L. Burr and W. W. Darden are the stockholders.

I. Edwards Company, of Batesburg, S. C., has been formed to deal in fertilizers, with \$10,000 capital, by I. Edwards and M. B. Edwards.

Oklahoma City Packing Company, of Oklahoma City, O. T., will increase its capital to \$200,000, and make many improvements. The company has been reorganized with these officers: President, C. G. Jones; secretary, Geo. Sohlberg; treasurer and manager, H. L. Krider. A lard refinery will be built; fertilizer and glue plants added; the cold stores increased in size; the hog abattoir increased in capacity from 500 to 2,000 head, and the cattle abattoir from 250 to 500 head per day.

C. J. Gratiot, soap manufacturer, of St. Louis, Mo., is considering moving his plant to Little Rock, Ark.

A new salt company composed of capitalists of Los Angeles, Calif., is being formed in that city.

Wheeler Brothers Company, of Boston, Mass., has been formed to manufacture soap, with \$50,000 capital. The president is Harvey C. Wheeler.

Bain Brothers' Company, of Boston, Mass., has been chartered to deal in provisions. The capital is \$50,000, and the officers: Barnabas H. Bain, Wollaston, president; William H. Bain, Boston, treasurer, and Thomas Hall, Roxbury, clerk.

The Jacob Dold Packing Company, Buffalo, N. Y., plant was damaged by fire December 31st, to the extent of \$15,000 to \$20,000. It was fully insured. Fire started in the lard rendering department.

Aberdeen Cotton Oil Company, of Aberdeen, Miss., with \$75,000 capital, has been incorporated. The promoters are J. W. Taylor, J. M. Boone, and F. M. Curlee.

The plant of the Union Meat Company, of Portland, Ore., was burned January 4. Loss is stated to be \$100,000.

United States Extracting & Refining Company, of Brooklyn, N. Y., has been incorporated with \$250,000 capital. The directors are John T. Morse, Robert C. Kelsey, New York; Daniel E. Foley, T. E. Fitzgerald and J. L. Mackle, Jr., of Brooklyn. The company is to extract grease and by-products from wool and other sources, etc.

Armour & Co.'s Hartford, Conn., branch was damaged by fire to the extent of \$5,000 January 2. The loss is covered by insurance, and the damage is being repaired.

The Schwenger-Klein Company, of Cleveland, O., with \$100,000 capital, has been chartered to deal in meats, sausage, etc. The incorporators are A. L. Klein, S. J. Schwenger, Arthur Malling, Ben Schwenger and Fred Desberg.

Thomas F. Henry, of North Adams, Mass., has been appointed manager for E. C. Swift & Co.'s wholesale beef house, at Woonsocket, R. I.

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(Continued from page 17.)

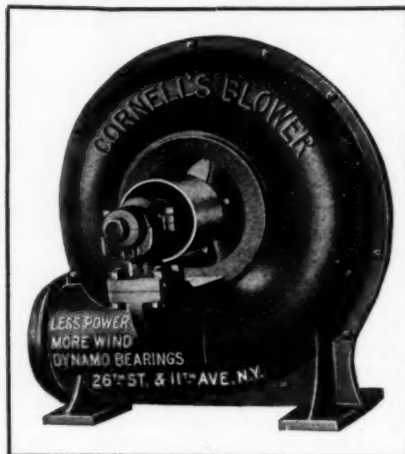
MILWAUKEE.

	Dec. 31, 1904.	Dec. 31, 1903.
Mess pork, winter packed (new), bbls.	7,463	2,202
Mess pork, winter packed, bbls.	640	515
Other kinds of barreled pork, bbls.	5,888	2,500
Prime steam lard, contract, tcs.	4,260	1,991
Other kinds of lard, tcs.	4,465	1,106
Short rib middles, lbs. .	3,812,866	1,415,365
Extra short rib middles, lbs.	278,811	196,652
Short clear middles, lbs.	53,825	354,368
Extra short clear middles, lbs.	157,297	122,310
Long clear middles, lbs.	60,976	161,000
Dry salted shoulders, lbs.	421,263	435,807
Sweet pickled shoulders, lbs.	405,550	234,850
Sweet pickled hams, lbs.	5,821,300	3,849,312
Dry salted bellies, lbs. .	1,023,427	827,678
Sweet pickled bellies, lbs.	727,850	375,750
Sweet pickled California or picnic hams, lbs. .	1,243,200	617,100
Sweet pickled skinned hams, lbs.	874,200	1,034,840
Other cuts of meats, lbs.	5,085,526	2,989,124

SWIFT ADDITIONS AT KANSAS CITY.

Swift & Company are keeping up with the march of packinghouse improvement at Kansas City by extensive alterations and additions to their plant there. Work on the enlargement of the beef killing and oleo departments is understood to be already under way, and it is even reported that a soap factory and canning and can-making departments will be added. A dispatch from Kansas City says:

The work on the enlargement of the plant of Swift & Company, in Armourdale, is being pushed quietly but energetically and in a short time a large force of men, it is said, will be employed in the construction of the



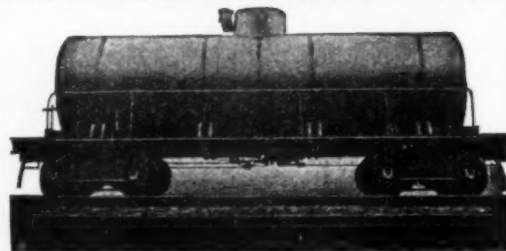
various new departments to be located in connection with that plant in Kansas City. The large cooling tank, for water used in cooling the fat for oleo, is being moved from the top of the killing beds to a location on a foundation of its own. This is to be placed on the east side of what is known as the "east row" of the building, and a foundation of concrete and seven feet high, has already been constructed for it. This tank is to be enlarged about twice its present capacity.

By removing the tank from over the beef beds the killing floor will be raised and the capacity for killing cattle increased by almost 100 per cent. The capacity now is 1,500 per day. By doubling this it will be as large as any plant in Kansas City. It is said also that the laundry, which is now located over the wholesale market, will be moved to a building of its own, allowing room for a larger market.

The soap plant, now located at Chicago, will probably be moved to Kansas City in the spring and a site has been selected for it northeast of the lard refinery building. A large amount of building material is already on the ground and more is being brought in and unloaded at the plant almost every day. It is said also that the cannery and tin can factory will be moved from Chicago within the coming year.

See page 48 for bargains.

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POISON FAILS WITH BOLL WEEVIL

By W. D. Hunter, Special Agent Bureau of Entomology, U. S. Department of Agriculture.

During the past season there has been a very extensive use of Paris green in an attempt to control the boll weevil in Texas. This has been due to several mistaken conceptions about the habits of the pest, as well as many misconstructions of the results of applications made in the field by various parties. It has been known for many years that it is possible to destroy a certain number of boll weevils by the use of Paris green, provided applications are made early in the season before any squares are set upon the plants. At this time the weevil feeds on the opening leaflets, and heavy applications of sons have thus killed a certain number of weevils and have concluded that the number found feeding upon the young plants having no squares represents the total number of weevils in the field.

As a matter of fact, however, abundant observations have proven that a very great majority of weevils do not come from hibernating quarters until after the plants have begun to put on squares. After squares are formed upon the plants the weevils no longer feed upon the leaves, but puncture the squares, and are then beyond the reach of poison. It will be seen from the foregoing statements that early in the season a few weevils may be killed by the use of Paris green, and it is from this fact that the idea has taken hold of many farmers in Texas that in this poison they have a specific against the pest.

On account of the very great attention which has been called to the proposed method of controlling the boll weevil by means of Paris green the Department of Agriculture has devoted special attention to the matter. Experiments have been performed at different points in Texas upon the experimental farms of the Bureau of Entomology, in which care was taken to eliminate all disturbing factors and to obtain accurate information regarding the possibility of poisoning the weevil. In addition to this work, agents connected with this Bureau have visited practically all of the fields at which, at one time or another during the season, the owners have supposed that satisfactory results have been procured.

Used Much of the Poison.

The Bureau of Entomology has from time to time during the season warned the planters through the press against placing too much dependence upon poison, but despite these warnings it is estimated conservatively that at least 25 carloads of Paris green have been used in Texas. The rather complete results of the work that has been conducted by the Bureau of Entomology are presented in the bulletin on the subject issued by the Department. As a result of all that has been done by the Department, as well as the conclusion from careful examinations of many cotton fields in Texas, the Bureau of Entomology does not recommend the use of Paris green in an attempt to control the boll weevil.

The fact that applications of Paris green will kill a certain per cent. of weevils upon treated plants has been known to the agents of the Bureau of Entomology for ten years. Its use through the medium of a spray was suggested as early as 1895 and repeated in

1897 and in 1898. It was, however, recommended then only as a means of killing off some of the hibernated weevils before squares appeared on the cotton.

Had No Positive Value.

Through the repeated experiences of several seasons it had been found that spraying cotton with a solution of Paris green had no positive value in controlling the boll weevil throughout the season, and this conclusion has been generally accepted as well established. Therefore the work of the agents of the Bureau of Entomology with Paris green during the season of 1904 has been confined mainly to the application of the poison as a dry powder. Many claims have been made for the superiority of this method of using the poison and for its efficacy, when so used, as a remedy for the Mexican cotton boll weevil. Early in the spring of 1904 a comprehensive series of tests was begun upon areas sufficiently small to allow every plant to be thoroughly prepared, treated, and examined, so that as far as is possible in the field every weevil might be accounted for and the exact effect of the poison determined under the varying conditions of the test made.

Upon more extended areas the Bureau of Entomology has this year conducted field tests extending through the season. Checks were kept in these field tests and the results of the poisoning must be judged by a comparison of the crop records of poisoned and check areas, which in all other respects were intended to be under similar conditions and to receive identical treatment. In addition to the field results, determined by agents of this Bureau, the experience of a number of representative, practical planters has been drawn upon.

Whatever results might have been obtained upon small areas, it is evident that only results of actual field practice in various localities and by a number of men could ever demonstrate the advisability of adopting or rejecting the use of dry Paris green in the fight against the weevil.

The conclusions reached as a result of the investigation are that repeated tests have shown that about 30 per cent. of the weevils on the plants may be killed by a heavy application of poison when the plants are small and without squares. But since the gradual emergence of weevils from hibernation extends over a period of from six to ten weeks, so that it continues long after squares have formed, the killing of 30 per cent. at the time squares begin to form means really but a very small percentage of the total number of hibernated weevils. Continuous use of poison throughout the season on the Government farms has not shown any gain from the use of poison. The tests made by individuals have, as a whole, failed, there being only one instance of apparent success in contrast to the great number of admitted failures.

Even where apparently successful the results were mainly due to the yield from improved seed being contrasted with that from native seed. The greatest apparent success

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was in the field of Mr. W. Withers, Lockhart, Tex., where the land was repeatedly broken prior to planting, and King seed was planted early, followed by thorough cultivation. This plat yielded immensely superior results over other plats in which the same variety of seed was planted later on land not so thoroughly prepared. No instance could show more strikingly the failure in the use of Paris green, and at the same time emphasize more conclusively the efficiency of the cultural method.

Facts That Were Proved.

From the rather extensive observations and experiments noted the Bureau of Entomology concludes that the use of Paris green in controlling the boll weevil is absolutely futile. This conclusion is based upon the following determined facts:

1. Persistent use of Paris green from the time of chopping until picking (in some cases as many as 15 applications) has failed to materially reduce the numbers of the weevils or to increase the yield.

2. Careful examination of very many experiments with the poison made by planters in Texas has failed to reveal conclusive instances of its successful use.

3. Reasons for the impossibility of poisoning weevils successfully are to be found in the facts that only a very small percentage emerge from hibernation before the squares are set upon the plants, that they do not drink the dew on the leaves at night, and that as soon as squares are set all feeding is done within the shelter of the bracts (shuck) beyond the reach of any poison that might be applied.

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PAGE 48

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FULL GROWN AT BIRTH

The great trouble with many new enterprises is the effort to be born full grown. Hardened experience by careful growth is the need for a permanent and healthful business existence. To attempt to envelop the situation with a complete and fully ramified equipment, no matter how much money is at hand, is costly and suicidal. Buying a going concern of large dimensions without a larger to attach it to or without the trained heads which built it to continue to guide it, is a losing venture. That, at least, has been the packinghouse experience.

In the face of all this field's disastrous teaching in this respect it is the aspiration of most new enterprises to enter the field of competition full fledged for the contest over all the avenues of the industry without the penalty of the stages and years of growth. Such a dash against seasoned and experienced concerns that have fought their way can have but one end—ultimate shrinkage to normal size or failure. A new business on too large a scale with lack of knowledge, consequent negligence, other mistakes and accidents added to the inevitable jolts in the course of any concern's business career, bring quickly the disasters which have in the past

and which will in the future beset the full-fledged and fully grown infant at birth. For this reason big new ventures in the packinghouse field have died at or near birth, or have had a prenatal demise, and the smaller carefully-piloted ones have succeeded even with the competition of giants bearing on their course.

FEDERAL TRADE LICENSE

Many Congressmen, in a frantic effort to regulate interstate and foreign commerce, would license trade, issue Federal franchise to conduct business by compelling the Federal incorporation of commerce companies under Federal instead of State supervision, as at present. Any national license system, under whatever name, would be pernicious. It would open up a system of bribes and special privileges which would out do those in vogue in Spain and Spanish American countries for years, and defeat the free trade doctrine of our constitution.

Congress can pass a law making all domestic commerce interstate in character. The intent of the new scheme is to have Federal regulation of the agencies of interstate and foreign commerce. Such regulation may not be more sincere or effective than the supervision which the Federal government has already attempted. A statute making all domestic commerce interstate in character, with a provision enforcing free distribution, as such, in all states, would meet the end desired. Federal licenses can be abused in the giving. Bribery is too rampant now in government circles and affairs.

Just where Uncle Sam may start or end as a merchant is not defined. If the constitution means anything, it stands squarely in the way of Federal licenses of this sort. If it means nothing, anything can be done. The road will certainly open for special privileges, limitless bribery and no benefit to trade or the public. The whole idea as suggested seems to be pernicious in the extreme.

EUROPE'S LIVING COST

The cost of living has increased all over Europe. The price of necessities has advanced nearly 100 per cent. in the past five or six years. A notable advance took place in 1904, as compared with the previous year. The price of first quality beef advanced from 15c. to 17c. per pound, and that of second quality from 13c. to 15c. per pound, the latter showing the higher relative advance. Rye flour rose from \$4.87 to \$5.68 per 220½ lbs., wheat flour from \$5.68 to \$7.31, and potatoes from \$1.06 to \$2.15 for the same quantity. In some parts of Europe the rise has been higher. The above has been the experience

of German Bohemia, the famous cheap labor district of Austria.

Provisions have advanced all along the line, especially in protected Austria, France and the German Empire. The drought which caused the drying up of and the stopping of heavy navigation on the Elbe during the summer may have had something to do with freight rates, but that item is too small to affect a general calculation. This dry spell has done much to advance the local price of grains and flours. The general advance in the price of provisions has been more marked than that of most other products, and of fresh meats. This is due largely to the barring of foreign meats and the scarcity of the home supply. All Germany is somewhat similarly affected. This condition must be further aggravated by the shortage of the European forage and feed crops and the consequently higher prices which the local market must pay for that which has been harvested or the importations necessary to meet the exigencies of the case. Europe is filling up, and the source of the flesh food supply is contracting to an alarming degree.

The food problem breeds more discontent on the Continent than any other factor. Conditions are getting harder, the mass of the population is getting denser and denser and competing more frantically for the chances of livelihood left. This causes the pressure downward of wages. The necessities of life are rising and hunger is rampant. That breeds malcontent. The easy swing of the rural life is interrupted by this thing, hunger and the lack of food. A starved peasantry is a menace at all times. Europe is helplessly unable to feed her masses, and the surplus of America is withheld from them in order that the purses of a few might be fattened by a pressure on the scantily victualled home market.

ADDED CURING COST

There are indications that the price of sugar will be raised. Sugar is an important factor in the provision and canned goods lines. It is, in fact, a more important factor in the food trade than salt. Any rise in the price of sugar means a costlier sweet pickle for the entire ham, bacon and beef curing trade. The canned goods industry, like the other branches of the packing industry, has already felt the burden of the cost of sugar. An increase in this line will bear heavily upon the interests which are compelled to use this curing agent in the factory processes. It has not been very long since the packers had to meet the attempted rise in the price of salt. The public resents any effort of wholesalers to add these costs to the retail price. It is to be hoped that six cent sugar by carload lots is not in sight.

TECHNICAL AND SCIENTIFIC

THE PRESERVATION OF MEATS.

Whatever we look at, and considering all that surrounds us in every direction, we must admit that nature knows no constancy. Nature unfolds before the observing mind the great picture of death. Birth itself is but the beginning of death, since the whole structure of everything coming into existence is constantly changing, the present constituents being unceasingly replaced by new formations, in living bodies as well as in the motionless substance forming the mountains and the vegetable kingdom. However slow these changes may occur, the fact remains that such is the uncontested law of nature, which, by human interference, may be accelerated or retarded at will, although it cannot be altogether arrested.

An instance of acceleration of the dying or decaying process caused by human interference is the forced cessation of life in animals where, aided by the unnatural arrest of the blood circulation within the animal body, the germ-resisting power of the blood is discharged from fulfilling its purpose. Decomposition of the meat sets in as soon as the blood ceases to pulse in the veins, and it is, therefore, the duty of those preparing such meat for human consumption to immediately apply such means of obstruction against the rapidly developing decay as may be best suited in each individual emergency, keeping always in view the double purpose of such intervention; that is, retaining in the meat its original color, taste, and consistency, and properly preserving it until the time of its consumption.

The nature of preservation must be governed by circumstances such as the kind and quality of the article to be preserved, length of time and climatic condition, etc. While salt, vinegar and alcohol merit recognition on the strength of a long-continued usage as preservatives, modern science has taught us the much more active and equally or less harmful application of other preservatives, such as borax and boric acid, which excel those obsolete substances mentioned in activity for the purpose sought, as well as in the fact that their application is more readily accomplished, and for the reason also that they do not permeate to such a considerable extent the meat to be preserved, but perform the duties rather of a coating impervious for decay-producing germs.

Many other methods of preservation have been tried with variable degrees of success; and of the more thoroughly tested ones the following probably include all of those, deserving more than passing mention or consideration:

1. The exclusion of external, atmospheric electricity, which has been observed to materially reduce the decaying of meat, milk, butter, beer, etc.
2. The retention of occluded electric currents. Meats from various animals packed

into the same packages, and surrounded by a conducting medium, such as salt and water, liberate electricity.

3. The removal of the nerve centres. Carcasses with the brains and spinal cord left therein will be found more prone to decomposition than those wherefrom these organs have been removed.

4. Desiccation. Dried beef is an excellent example of this method of preservation. Other methods coming under this heading are the application of spices with ethereal oils, various herbs, coriander seed extracted with vinegar, etc.

5. Reduction of temperature.

6. Expulsion of air from the meat and the containers. Appert's, Willaumez', Redwood's and Prof. A. Vogel's methods are representative for this category of preservation. Phenyl paper, Dr. Busch's, Georges' and Medlock and Bailly's processes are equally well known.

7. The application of gases. Here may be mentioned Dr. Gamgee's and Bert and Reynoso's processes, applying carbon dioxide and other compressed gases, respectively.

Air drying, powdering of meat, smoking, pickling, sugar or vinegar curing, are too well known to receive any further attention here. Whatever process may be employed, preference should be given to that which will secure the principal objects sought for, the most satisfactory being at the same time not deleterious to health, and of an easily applicable and inexpensive nature.

NEW PATENTS.

778,099. Process of Making Sulphur Trioxid. Henry S. Blackmore, Mount Vernon, N. Y. A process which consists in inducing the oxidation of sulphur dioxide with a gaseous oxidizing substance capable of producing an endothermic reaction, by supplying heat thereto, and keeping the temperature from rising to the disassociating point of sulphur trioxid by controlling the heat supplied.

777,976. Ice-Cutting Machine. Frank J. Reinhold, Detroit, Mich. The combination of a gang of rotary saws mounted upon a horizontal shaft whose inner end carries a miter-wheel, a vertical shaft carrying a miter-wheel meshing therewith, a rotary saw mounted on the upper and thereof, a carriage adapted to move above the vertically rotatable saws, a rack actuated by a pawl mounted on a shaft for moving the same, and means for driving the mechanism.

EVERY WEEK
Some New Chance
TO GET A BARGAIN

See Page 48

THE DRYING OF COAL.

There is now in operation at St. Louis a plant erected by the government for testing coal and briquettes as sources of heat for power plants. Dr. Holmes, Chief of Mines and Metallurgy, is in charge of the work, which has been going on for some time. Already results of value have been obtained from the tests made, and more are expected. The suggestion has been made that the experiments be broadened slightly so as to include not only briquetted coal dust, but the various machines made for burning the coal dust direct. This latter form of fuel has been used in so many large establishments with such great success that in spite of the prejudice against the idea many owners of power plants are seeking more light on the subject. It would be possible through these government tests to try out the scheme and let the public have the advantage of accurate knowledge on the subject.

The cost of pulverizing and drying coal is very much less than that of briquetting, and it seems to be entirely practicable to utilize low grades of bituminous and lignite coals in the form of dust. At any rate, the Indianapolis Water Works, Indianapolis, Ind.; Illinois Central Railroad Company, Chicago, Ill.; International Harvester Company, Chicago, Ill., and Erie City Malleable Iron Works, Chicago, Ill., and many other concerns are burning dust and think they are saving money by so doing. A number of different firms are now making the necessary machinery for burning coal dust. The Schwartzkopf Coal Dust Burning Syndicate, of Haydock, England, has conducted experiments along this line for a number of years at great expense, and have now perfected a system which is ready to be put on the market.

The C. O. Bartlett & Snow Company, of Cleveland, O., has manufactured a system of burning pulverized coal without any change in boilers or furnaces of hand-fired plants, which has been installed in a number of plants, and has greatly increased the interest in efforts to utilize coal dust as a fuel. In this connection the following extract on drying coal from a paper read by C. O. Bartlett at the American Mining Congress recently, on "Mechanical Drying of Minerals," will be of interest. Mr. Bartlett said:

Coal is one of the most peculiar and interesting of all the materials that we have to dry. With some materials it is simply to drive off the moisture, in others to drive off the moisture and not injure the color, while with coal the object is to drive off the moisture and preserve the gases, also the fine particles, which are the most valuable parts of the coal.

The use of the rotary kilns for roasting ores and for burning Portland cement, has of late years increased very rapidly, and the use of powdered coal in annealing furnaces, and also the use of coal in a pulverized state under boilers, has caused a rapidly increased demand for pulverized coal. From observations taken during the last year, I fully believe that in all large and medium-sized plants the power will be supplied with coal dust, burned similar to gas. I feel sure that this is the only way to get perfect combustion, and that a very large saving can be made by using coal dust. This branch of

(Continued on page 35.)

WE MAKE A SPECIALTY OF SAVING BY-PRODUCTS

Swenson's Patent Multiple Effects

Rotary Dryers and Other Special Machinery for Tank Water, Glue, Beef Extract, Brine, Etc.

AMERICAN FOUNDRY & MACHINERY CO.

944 MONADNOCK BLOCK, CHICAGO.

FOR PURCHASING DEPARTMENTS

WON AGAINST STRONG COMPETITION.

The Northern Electrical Manufacturing Company, Madison, Wis., recently received an order for three 150 k. w., slow-speed generators from the Tennessee Coal, Iron and Railroad Company, of Birmingham, Ala. The order was received through J. B. McClary & Co., representing the Northern Electrical Company at Birmingham.

The Tennessee Coal, Iron and Railroad Company is the largest of its kind in the South, and the order was secured in competition with all the first-class manufacturing companies, even though the prices on Northern machinery were met by competing manufacturers. The order was awarded after thorough examination and careful consideration of Northern machinery and given on the basis of superiority.

SPECIAL HIGH POWER ENGINES.

The rigid specifications drawn by the United States Navy Department for auxiliary engines required in the equipment of vessels of recent construction, have done much to improve their general standard of efficiency. It is therefore unusual to find that even these exceptional requirements have been improved upon. Such, however, is noticeably true in the case of recent designs of vertical cross-compound engines built by the B. F. Sturtevant Company, Hyde Park, Mass., for direct-connected generator driving. They have actually shown upon an economy test a consumption of steam per horse power per hour fully four pounds less than that demanded by the specifications. These results are characteristic of a line of specially high-grade engines being built by the above-mentioned company to develop from 25 to 150 h. p.

HOHMANN & MAURER'S NEW FACTORY.

The Hohmann & Maurer Manufacturing Company, Rochester, N. Y., the famous thermometer manufacturers, have so outgrown their present quarters that they cannot handle all the business coming to them. They are now about to build a new factory, which will give them room to expand. They have purchased a large tract of land, measuring 310 by 322 feet, having their own railroad connections by means of a special switch. The present plans call for 60,000 feet of floor space, with frontage of 280 feet, and three wings. When the building is completed they will have a total floor space of three times this amount, or 180,000 feet, with five wings.

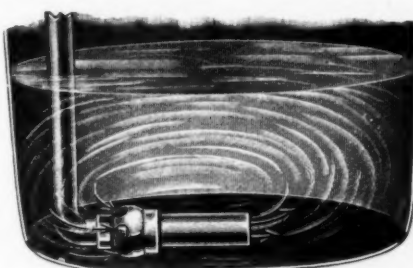
They are erecting the building in this manner because light is one of the most important requirements to manufacture thermometers of the Hohmann & Maurer quality. The building will be of the most improved slow-burning mill construction, having the sprinkler system throughout. They will have their own electric and gas plants, so that they will have plenty of light when obliged to work at night. They have the plans well under way, and expect to commence building within a month, so that they may be installed and have everything in working order not later than August or September, 1905.

Buyers in all lines will do well to watch this page every week.

A NOISELESS WATER HEATER.

All packinghouses do a great deal of heating of water in tanks and are caused considerable trouble by noise. The Davies Warehouse & Supply Company, 20 North Clark street, Chicago, are calling their attention to their noiseless water heater, or steam muffler. This is being universally used now throughout the country wherever steam is used to heat water in tanks for cooking or any other purposes.

The illustration showing it in operation indicates the way it should be set. Packers



who have not already secured one of these noiseless water heaters should write for circulars and prices. The Davies Warehouse and Supply Company makes them in sizes from 1/4-in. up to 2-in.

The use of this heater does away with all noise such as otherwise occurs when heating a tank or barrel of water or other liquid with steam. It is of special value to packinghouses, creameries, chemical works, breweries, etc. It is especially suitable for heating blood in storage tanks. It has no couplings and no loose parts to get out of order. Simply put a piece of pipe ten or twelve inches long into the large end of heater and screw heater on to end of steam pipe and place below the surface of the liquid, as shown in cut, and it will heat it quickly and without waste of steam.

BRECHT REFRIGERATORS.

The new building for the construction of refrigerators and cold storage works erected by the Brecht Butchers' Supply Company at St. Louis, is now completed, and the plant is in operation. It is in charge of William Knehans, one of the best superintendents in this line in the country, and his work is a guarantee of a first-class product.

This department has orders for a large number of refrigerators for early delivery, and is running full time in an endeavor to get a stock on hand for the spring trade.

FRED W. WOLF COMPANY SALES.

Fred W. Wolf Company, Chicago, Ill., have made the following recent sales:

J. Wildredge & Sinclair, Sidney, New South

Wales, 10 sections of Wolf standard ammonia condenser.

Planters' Compress and Bonded Warehouse Company, West Point, Miss., 50-ton ice-making and refrigerating apparatus, with 20-ton freezing system and piping for cold storage rooms.

Westerlin & Campbell, consulting engineers, Chicago, Ill., 65-ton refrigerating plant with brine tanks, coolers and water-cooling tanks, to be used in connection with new butterine factory, Chicago.

L. L. Summers, Port Huron, Mich., one second-hand refrigerating apparatus of 3 1/4 tons capacity.

Henderson Brewing Company, Henderson, Ky., 4 sections of Wolf standard ammonia condenser.

Charles Wolff Packing Company, Topeka, Kan., complete distilling and filtering apparatus to be used in connection with their present ice-making plant.

Consumers' Ice Company, Charleston, S. C., 5 sections of Wolf patent steam condenser.

F. W. Cook Brewing Company, Evansville, Ind., Wolf patent ammonia distiller and purifier and direct expansion piping for their cellars.

Parsons Cold Storage and Crystal Ice Company, Parsons, Kan., one complete 25-ton ice-making plant.

Cherryvale Ice and Cold Storage Company, Cherryvale, Kan., 50-ton refrigerating compression side, with 20-ton freezing and distilling system.

North Ft. Worth Ice and Cold Storage Company, Ft. Worth, Tex., complete 25-ton ice-making plant.

Henry Delno, Kingsville, Tex., complete ice-making plant of 10 tons ice-making capacity.

Glenville Coal and Ice Company, Glenville, Ohio, complete 25-ton ice-making plant.

Beeville Ice Company, Beeville, Tex., 25-ton refrigerating compression side with 10-ton freezing and distilling system.

P. Schoenhofen Brewing Company, Chicago, one 300-ton refrigerating machine with cross-compound condensing engine.

Cotter Spring Ice Company, Cotter Spring, Ark., complete 10-ton ice-making plant.

Atlanta Ice and Coal Company, Atlanta, Ga., one 225-ton refrigerating machine and high pressure side; also expansion coils for freezing tank.

Standard Brewing Company, city, direct expansion piping for cellars.

Vette & Zunker, Chicago, 25-ton refrigerating plant to be installed in their new packinghouse.

Isaac Leisy Brewing Company, Cleveland, Ohio, complete 70-ton distilling apparatus.

Joseph Schlitz Brewing Company, Milwaukee, Wis., remodeling their present vertical machines by substituting Wolf-Linde compressors, and furnishing 16 sections standard of atmospheric ammonia condensers.

January, 1905, A SPECIAL ISSUE
"Graphite" ON LUBRICATION.

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JOSEPH DIXON CRUCIBLE CO., JERSEY CITY, N. J.



ICE ELEVATING —AND— LOWERING MACHINE

Operated by Horse Power.
Suitable for filling large ice-boxes and for use at Packing Houses.

Readily moved from one door to another.

Write for Catalogue and Price-List, illustrating and describing all modern methods of handling ice.

GIFFORD BROS.
HUDSON, N. Y.

ESTABLISHED 1814

ICE AND REFRIGERATION

NEW CORPORATIONS.

Clover Leaf Creamery Company, of Toledo, O., has been incorporated by R. D. Gilson, G. E. Kinney, G. C. Herbert, J. E. Manning and A. D. Gilson. The capital is \$50,000. A fifteen ton ice plant will be installed.

City Ice Company, of Jeffersonville, Ky., has been chartered with \$30,000 capital. The incorporators are Charles F. Antz, William C. Antz, Henry O. Hoffman and James H. Duffy.

New England Refrigerating Company, of New York City, has been incorporated. The capital is \$300,000. The directors are James F. Place, Glen Ridge, N. J.; Clarence Place, New York City, and D. Francis Hamen, Brooklyn, N. Y.

Saginaw Butchers' Ice Company, of Saginaw, Mich., has been incorporated. The capital is \$3,000. The stockholders and officers are local butchers, among them being E. D. Francke, C. W. Henning, J. W. Symon, A. P. Carle and A. G. Fink.

Clarksdale Ice and Bottling Company, of Clarksdale, Miss., has been incorporated with \$25,000 capital.

Amarillo Beer and Ice Company, of Amarillo, Tex., has been chartered. The capital is \$20,000, and the incorporators are: W. L. Thompson, A. Davidson, of Amarillo, and S. Davidson, of Ft. Worth.

Grand View Mill, Light and Ice Company, of Grand View, Tex., has been chartered. The capital is \$20,000, and those interested are, W. Burres Head, R. E. Pitts, T. E. Pittman, T. T. Sturgis and T. F. Martin.

Bishop Ice and Cold Storage Company, of Inyo, Calif., has been chartered. Charles T. Brant is the promoter. Besides dealing in and manufacturing ice the new company will do a general commission and cold storage business in farm and dairy produce.

Brookside Ice Company, of Newburgh, N. Y., has been incorporated with \$50,000 capital, by S. L. T. W., and Ida C. Stewart, all of Newburgh.

Crystal Ice Company, of Little Rock, Ark., has been formed by W. O. Drake, J. A. Kendall and J. L. Clark, of Cleveland, O., to build a plant to furnish ice to the American Refrigerator Transit Company for re-icing cars. The capital is \$75,000.

Cleveland Ice and Cold Storage Company, of Cleveland, Bradley County, Tenn., has been

incorporated with \$50,000 capital, by J. P. Bartlett, G. L. Hardwick and J. E. Mayfield.

ICE NOTES.

An ice plant will be put in at Cedar Falls, Ia., by a company now organizing.

George P. Elliott, of Rochester, N. Y., is interested in a project to build a cold storage warehouse adjoining the new public market. He plans to spend about \$225,000 on the building and plant.

A cold storage and ice plant is being built at Montrose, Colo., by John Heckert. The Golden Brewery is interested in the concern.

Rhode Burke, of Omaha, Neb., is building a cold storage plant in South Omaha. It is the only such plant there, outside of the packing plant warehouses.

William T. Wood & Co.'s large ice tool manufacturing plant at Arlington, Mass., has been damaged about \$15,000 by fire. The main building was burned partially. A temporary structure already has been erected and the work of the rush season will not be interfered with.

The Carrollton Electric Company, of Carrollton, Ga., wants a five ton ice machine, second hand.

Charles Gilpin, contractor and builder, of 601 Union Trust Building, Baltimore, Md., wants an ice and refrigerating plant for the Caswell Hotel Co.'s building in Baltimore, for which Mulliken & Moeller, architects, 7 West 38th street, New York, have plans and specifications.

The stable of the Citizens' Cold Storage and Ice Company, of Owensboro, Ky., was burned recently. Loss, \$3,000.

The Wooster Ice and Coal Company, of Wooster, O., has contracted for the entire ice output of the Wooster Artificial Ice Company.

Josiah T. Newcomb has been appointed receiver for the Wm. N. Montgomery Ice Company, of West Fortieth street, New York City, on a petition in involuntary bankruptcy.

R. W. Vanness, of Oxford, O., is planning to build a cold storage warehouse.

WANTED AND FOR SALE.

Bargains in ice machines or refrigeration equipment may be picked up by watching page 48 every week.



WATER-SOAKED PAPER CONDUCTS HEAT SEVEN TIMES FASTER THAN WATER-SOAKED WOOD, HENCE THE NECESSITY FOR

GIANT INSULATING PAPER,
WHICH POSITIVELY WILL NOT ABSORB MOISTURE.

There is no chance for water to get into the fibres, for every cell is filled with the water-repelling Giant Compound, manufactured by us, alone, and used in no other papers. They are air-tight. Standard for eighteen years.

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C. B. COMSTOCK Refrigeration Architect & Engineer

Union Stock Yards,
Herr's Island, Pittsburg, Pa.

Specialist in the DESIGNING and BUILDING of PACKING HOUSES, ICE, POWER and CREAMERY PLANTS. Upon application I will send to prospective builders a partial list of PLANTS I designed.


IMPROVEMENTS IN REFRIGERATION.

By John E. Starr and Karl Wegemann.

(From Cold Storage and Ice Trade Journal.)

(Concluded from last week.)

Another combination of the two types of machines, where cold water is obtainable is valuable in cold storage warehouses where it is desired to take up heat on two planes of temperature, as in the case of a considerable amount of low freezing, such as poultry and butter storage, and also a considerable amount of egg and fruit storage. In such a case it is always desirable to have at least two brine circuits, one for relatively high temperature brine and one for low brine, and if only one circuit is used, all the heat must be taken from the brine at the low plane of temperature—an uneconomical method. By the use of two circuits the high brine can be put on a compression machine, which can be run at a high back-pressure and consequently at a low coal cost, while the low brine can be put on an absorption machine which works with economy on a low back-pressure, if cold water is available. In addition to this the exhaust of the high brine machine can be effected. In cases where cold water is not available the two-circuit system can be used on a two-cylinder compression machine by putting one cylinder on high brine at a high used to operate the low brine machine, so



Every packer wants the most economical refrigerating machinery and which can be depended upon to produce the maximum of capacity with the minimum of cost, and be the simplest and easiest operated.

The Vogt Machines may be depended upon to meet your requirements, no matter how rigid they may be. Based upon the Absorption System—the only really scientific refrigerating system—these machines produce results not otherwise possible.

We want every packer who is thinking of installing refrigerating machinery or making any changes to hear our story before he makes any decision. We like to get inquiries and to answer them.

HENRY VOGT MACHINE COMPANY
10th Street and Ormsby Ave. LOUISVILLE, KY.

that practically a very great saving can be back-pressure and the other cylinder on the colder brine at a low back-pressure. The suction are, of course, separated, but the discharge may be common to both cylinders. In large plants the plan of putting one entire machine on high brine and another on low brine is becoming common practice, but there are still many cold storage installations that are taking up all the heat from the brine on the lowest plane of temperature.

Brine Circulation.

While on the subject of brine circulation we may make mention of a new application of an old method that is working out well in the warehouse in Ohio that was mentioned earlier in this paper as being constructed of tile and cement.

NONPAREIL AND IMPREGNATED SHEET CORK INSULATION

FOR CHILLING AND
STORAGE ROOMS

Armstrong Cork Company
Pittsburgh, Pennsylvania

W. H. BOWER, General Manager. GEORGE E. BOWER, Secretary and Treasurer.

THE AMMONIA CO.
OF PHILADELPHIA
PHILADELPHIA, PA.

ANHYDROUS

**STRICTLY PURE
AND DRY**



FOR REFRIGERATING AND
ICE MAKING

B. P.—30° Fah.

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AGENTS.

New York City, 100 William St., Roessler & Hasselacher Chemical Co.
Boston, 45 Kilby St., Charles P. Duffee.
Buffalo, Seneca St., Keystone Warehouse Co.
Pittsburg, Pennsylvania Transfer Co., Ltd.
Baltimore, 1348 Block St., Baltimore Chrome Works.
Washington, 1227 Pennsylvania Ave., Littlefield, Alvord & Co.
Atlanta, Century Building, Southern Power Supply Co.
Jacksonville, Atlantic Coast Line Ave., S. H. W. Acosta.
New Orleans, Magazine & Common Sts., Finlay, Dicks & Co., Ltd.
Cincinnati, 9 East Pearl St., C. P. Calvert.
Chicago, 16 N. Clark St., F. C. Schapper.
Milwaukee, 136 W. Water St., Central Warehouse.
Kansas City, 717 Delaware St., O. A. Brown Company.
Omaha, 1013 Leavenworth St., Wm. M. Bushman.
Liverpool, Adelphi Bank Chambers, Peter H. McQuile & Son.

MINERAL WOOL MOST EFFECTIVE INSULATOR



FOR
COLD STORAGE, Etc.

CHEAP AND EASILY APPLIED

SAMPLES FREE

UNITED STATES MINERAL WOOL CO.

143 Liberty Street, New York City



WOOD'S ICE TOOLS ELEVATORS PLANERS

FOR
ELEVATORS
AND FOR
FIELD

Eighty page Catalog ready.

WILLIAM T. WOOD & CO., Arlington, Mass.

This is a modification of the "Linde" system.

In the latter system fans circulate air through an expansion coil bunker and thence by ducts through the rooms. The expansion coils are placed in a pan and calcium brine is distributed over the coils in a film, collected in the pans and returned by a circulating pump over the coils again. The coils are constantly covered with brine, hence no frost can accumulate. The calcium brine absorbs all the moisture and odor.

In the system introduced in the Ohio plant we modified the "Linde" method by first cooling calcium brine in a brine cooler and then pumping to the bunkers by suitable brine mains. No piping is placed in the bunker. The brine is simply showered over a brine spreader, which is a structure in the bunker presenting a large surface, practically the equivalent in construction of a wooden fanless water-tower. A very large cooling surface is thus obtained in a small space at a cost below iron pipe surface. The brine is collected in a pan under this structure, and flows through return mains by gravity to the brine pump suction. The pumps send it through the cooler and back to the brine spreader in the bunker. At first the brine was simply showered from the top of the bunker to the pan below by means of perforated pipes, but this sprinkler system was found to be defective because of the fact that the air-current induced by the fans drew particles of brine into the fan space and on to the motor and on the floor outside of the fan in sufficient quantities to leak through the floor and also to threaten the motor. When the brine spreader or film surface was substituted this trouble disappeared, and the whole system works very effectively. The ducts are made of hollow tile and are large enough for natural circulation after the room has been once cooled down with its goods. The fans can be used to hurry matters when loading up and for fast freezing work where rapidity of air current greatly increases the rate of freezing. In this plant, where the circulation is positive and all walls, ceiling and floor surfaces are of either cement or tile, the rooms are peculiarly sweet and clean. The absorption of odors by the brine is especially efficient. The fact that the same surface with the same temperature is always presented to the air in the bunkers instead of a changing amount of surface and a changing temper-

ature of surface, as the frost accumulates in the old method, is a distinct advantage. As the brine grows weaker from accumulated moisture it can be concentrated either at intervals or continuously by a little exhaust steam, and returned to the system after being cooled off. There is no chopping of ice off the coils and no loss of surface by frost growing from coil to coil or out against the walls.

In passing it may be said that the generator of the absorption machine that cools the brine in this plant is operated by steam from the exhausts of the water and brine pumps and other auxiliaries.

Brine Mains.

Two new things in the way of brine mains have made their appearance.

In building some rather extensive underground steam mains we were struck by the fact that the wooden tube or "log," as it is called, used for insulating the steam pipe, would make an excellent brine main. This "log" is composed of a double course of two-inch wooden staves, tongued and grooved, and bound together by a galvanized wire, wound with a tension that beds it into the wood. The ends of each length are mortised and tenoned accurately together, so that a joint can be made by driving the tenon into the mortise with a ram or maul.

This "log," so jointed, is perfectly tight under a water pressure of one hundred pounds, and as the wood is four inches in thickness, it provides its own insulation. We have had a section of it carrying zero brine in use for several months without sign of leak, sweat or frost.

The wood is treated by a creosoting process and coated on the outside with an asphalt compound, and a very long life can be expected of it. We have seen samples of this "log" after laying underground twenty-two years, and it appeared as good as new. Cast iron fittings in the way of tees, ells, etc., have been devised with an effective method of attaching them to the "log." No complete system of this style of brine main has yet been installed, but so far it looks to be a much better proposition than the ordinary insulated wrought iron main.

A cast iron pipe has been lately introduced in the Eastern market which it would seem offers many advantages for brine mains. This pipe is cast in six foot and shorter

lengths. At one end of each section is cast a slightly tapered tenon, and on the other a mortise or recess, both are accurately machined, one to fit the other. Lugs for bolts are also cast on each end of the pipe. It is only necessary to insert the tenon into the mortise and draw up on the bolts. We have recently witnessed a test of a section of this line under water pressure of from three hundred to five hundred pounds. The inventor took away the supports of the pipe, while under pressure, and stood on one of the joints, deflecting it six inches in six feet, or an angle of ten degrees. The joint remained perfectly tight. The bolts were then slacked off until a leak was started, then tightened and the leak stopped. A bolt on one side was then drawn up until the joint was angled sidewise about ten degrees without starting a leak. The line is therefore quite flexible, and considerable expansion and contraction seems to be permissible without starting a leak. A street brine line in Philadelphia has just been constructed of this pipe, and we understand that no leaks were found when the brine was turned on. Tees, ells and other fittings are made with the same joint and combination fittings are provided to connect these lines with other lines, such as wrought iron threaded or bell and spigot types. The cost of this pipe is said to be less than the cost of wrought iron pipe, and its erection would be considerably less as it can be put together very rapidly with cheap labor.

Water Towers.

While a number of new styles of water towers have been introduced in the last few years, the old wooden fanless tower when properly built seems to be about the best proposition, if roof room is available. One trouble with this style of tower lay in the fact that with moderate or high winds a considerable quantity of water will blow off. This not only is expensive from a cost of water standpoint, but it also seriously affects the operation of the machine, besides creating more or less of a nuisance in the immediate vicinity by showering water to the ground. The splash boards, usually used to decrease this difficulty are not effective, and they also impede the circulation of air. On a tower recently constructed we have gotten around this difficulty by putting up movable splash boards. One side and one end of this

(Concluded on page 34.)

COLD STORAGE & ICE TRADE JOURNAL

ESTABLISHED 1877

A MONTHLY NEWS AND TECHNICAL MAGAZINE OF THE
REFRIGERATING, ICE MAKING, NATURAL ICE AND ALLIED TRADES
PRODUCE EXCHANGE NEW YORK

TWO
DOLLARS
A
YEAR

TWENTY
CENTS
A
COPY

PROVISIONS AND LARD

WEEKLY REVIEW

All articles under this head are quoted by the bbl. except lard, which is quoted by the cwt. in tcs., pork and beef by the bbl. or tierce and hogs by the cwt.

Depressed and Lower Markets—Stocks Increased—Conservative Cash Demands—Unloading of "Long" Holdings—Not Much Selling "Short"—Speculation on the Whole of a Slack Order.

The temper of traders, as indicated last week, that there was much less hope of bullish movements for hog products, and that the probabilities were that the cheap priced cotton seed fat, together with influences of a more direct order upon the hog products, would tell upon the markets situation for them, materialized to facts first upon the trading markets on Wednesday of this week, when there was a break in prices all around, and of an especially emphatic order for lard, which had been added to in stock through December in rather a marked way, while the world's visible supply of it had materially increased. The declines in prices of pork and ribs were more of a sympathetic order with the lard situation.

Indeed, the stocks of pork were reduced at the packing points through December, as they showed at the beginning of this month, 16,000 barrels new, against 27,885 barrels November 30, and 22,000 barrels old, against 20,416 barrels November 30. On the other hand the contract lard stock increased in December from 19,409 tcs. to 46,600 tcs., and of other lard from 10,223 tcs. to 19,000 tcs., while the increase in the world's visible supply of lard was estimated for December as 68,000 tcs. against an increase of 15,000 tcs. in December, 1903. The stock of short ribs in Chicago had increased from 3,930,000 pounds to 13,750,000 pounds.

But it would appear, as well, that buyers are becoming very conservative in taking cash stuff and as waiting for settled market

conditions, and as, also, with some belief that if there is to be the enormous production of cotton seed fat that seems probable for the season on the ability to get plenty of cotton seed at steadily declining prices for it, and as this impression has been of a most decided order since the cotton ginners' report of the large extent of the cotton crop, that the compound lard is likely to be had at steadily favorable prices for buyers whereby there would be the natural difficulty in stimulating prices of pure lard, and rather that pure lard may be further weakened if the compound lard is again modified in price, and which latter seems a probable outcome from the steadily lower cost of cotton oil, and the not over firm stearine market.

Besides the expectations are of much more restricted buying by the South of meats on account of the low prices for cotton; moreover, there is every probability that a good deal of cotton will be held over until next season in hopes that a diminished cotton acreage planted next season will give decidedly better prices for the staple than seems possible for it in the remainder of this season, except as there is a possibility that cotton may be handled ultimately for better prices than can be made in the early part of the season for it, on the probability of a liberal volume of the cotton will for this season be held off the market.

The buying power of the South of food products is likely with the significant features indicated to be modified; and as the South is usually the largest consumer of the hog products in home trade sources its probable attitude in buying food products is having more or less influence to the current developments of the markets for them.

It is well understood that the speculation

in the hog products is likely to be of a very conservative order so long as market conditions in them fail to receive invigoration, and particularly now, as prices are at that low point, however much easier they may go, that there would be little disposition to sell them "short." Indeed, if outside interest is to be attracted a bearish look to affairs would hardly do it; and at the same time the "long" side of the market is not an encouraging one in consideration of the probable fat supplies and apprehensions of better conditioned hogs and plenty of them later on in the season.

It is a season in which consumption in an all around way is of very good volume in Europe and in this country, and as favored by reasonable prices; but at the same time the mood of the distributors to the consumers is against buying supplies materially ahead of near needs of them. And because this is the most active producing season for some products, and all are in some degree harmonized in market conditions, and more particularly for the cotton seed fats, the inability to move them out in a large way to people who in most seasons usually contract ahead for supplies proves an added burden to affairs.

There is not much new demand coming from Europe, although it is expected that the demands will, now that the holidays are over, start up thence a little. The consignments to Europe are of fair volume.

The hog supplies to the packing centres have been latterly less than in the corresponding time last year, and their market prices are fairly steady. The diminished hog receipts are, in part, owing to the bad weather over the West. This, however, does not account for the falling off in the weights of the hogs, yet that they are not arriving from the usual miscellaneous points, by which per-

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Steamers.	Destination.	Oil				—Beef.—			—Lard.—	
		Cake.	Cheese.	Bacon.	Butter.	Tcs.	Bbls.	Pork.	Tcs.	Pkgs.
1 Baltic, Liverpool.....			50	2561	...	80	...	116	510	5618
2 Victorian, Liverpool.....		2058	...	2628	...	425	...	323	1159	4738
Umbria, Liverpool.....			...	499	...	113	...	...	...	1050
St. Paul, Southampton.....			...	2013	...	...	...	...	100	2000
Menominee, London.....			...	97	...	50	...	188	48	1755
Consuelo, Hull.....			...	861	...	125	...	135	570	7967
Frankfurt, Bremen.....			185	...	50	500
Kroonland, Antwerp.....		10687	...	345	...	89	...	164	102	2780
La Savoie, Havre.....			25	200
Drumelzier, Havre.....		9626	...	...	...	...	...	...	...	...
Katanga, Havre.....		2320	...	...	...	100	...	...	...	...
Arkansas, Baltic.....		500	...	...	...	...	...	...	...	...
4 Georgia, Mediterranean.....			...	25	...	...	...	...	25	45
5 Ronia, Mediterranean.....		1319	...	...	...	...	...	...	106	750
Afghanistan, South Africa.....		51	15	...	162
Bucrania, South Africa.....		3	...	3	...	894
Total.....		26150	50	9029	...	985	236	944	2695	29359
Last week.....		24610	2736	8802	322	309	1114	828	6050	63131
Same time in 1903.....		29839	2369	9652	862	445	853	1097	6069	69667
1.—Tallow, 50 hhds. 2.—300 hhds. tallow.										
4.—150 hhds. tallow. 5.—100 hhds. tallow.										

*Vessel stranded on Fire Island.

TALLOW, STEARINE, GREASE and SOAP.

WEEKLY REVIEW

TALLOW.—As concerning our Eastern markets the usual lull in trading on the winding up of a year's business and the fact that buyers hardly get freely to work again, especially in New York, until about the middle of January, there is little of interest in the way of features to this market for our present review of it. At the West, however, the position is a strong and fairly active one.

There are opinions of a variable order concerning the eastern markets for their trading on the general resumption of business in them, with some contending that increased supplies of the tallow which may be had this month, and the productions of it, which are likely to increase thenceforth, may prevent further display of firmness to prices, and that the fact that cottonseed oil is at comparatively low prices may at length throw the tallow market more in favor of buyers, particularly if the lard market may develop to opinions which are becoming more numerous of lower prices for it. On the other hand, there are some opinions that tallow supplies will be closely needed for the next few weeks, and that because of the less than normal productions through the fall months and the fact that soapmakers as a whole are not carrying their usual supplies of tallow that needs of it will be sufficient for a limited time at least to use up any possible larger production. Our own opinion is that the tallow market in the future, perhaps not in the next week or two, will be shaped more as the lard market develops; and that it looks more probable than before latterly that an easier lard market is shortly coming about. The stock of lard is steadily, although moderately, increasing. And it, as well, would be hard to understand that bullish movements could happen to the lard market with the consideration of the cheap priced cottonseed fat by which compound lard is had at lower prices than it stood at only recently, while relatively much lower than usual with the prices of pure lard. And even at the low prices for the compound lard there is no briskness to trading in it, and which implies that buyers are apprehending still lower prices for the compound lard, and as they make up their minds in that direction from the cheap prices of cottonseed oil.

Until the compound lard business becomes active the compound makers are likely to ne-

glect, in some degree, the bottom market, and in any event would buy consecutively of, the beef fat at the prices for it, in consideration of the weak prices for compound lard. Therefore, the market is likely to be left more in the hands of the soapmakers. And if the soapmakers are not likely to have material competitive demands for the tallow they would probably confine their buying to actual needs.

It is true that the soapmakers have been holding off in some degree buying for the developments as to supplies and prices in January, and that there is likely to be some urgent demands for supplies through the month. But the point would seem to be that inquiries for tallow supplies would be restricted as much as possible.

Nothing of moment comes from the foreign markets in the way of business here. The London sale on Wednesday was by one cable 6d. higher on mutton and 3d. lower on beef, with 543 casks sold out of 1,500 casks offered.

The latest previous sale of New York City hhd. tallow was at 4½c. But on Thursday of this week a decline of ¼c. was made, and 200 hhd. of it bought by a local soapmaker at 4½c. The weekly contract deliveries, therefore, will be made at 4½c.

Edible tallow would be hard to buy under 5½c. for city made, with out-of-town lots at 5½c. to 5½c.

Country made tallow does not come in at all freely, as the makes are not large, and other markets seem to take up the supplies rather promptly at firmer prices for them than possible, just now, in this market. Sales have been made at 265,000 pounds of country made at 4½c. to 5½c., as to quality.

The western markets have not varied in any material degree. There is much more business in tallow and greases, at the western markets than at any other point, and the productions there of both of them seem to be well taken up and at firm prices.

Prime packers quoted at the West at 5½c., and city rendered at 4½c. to 4½c.

OLEO STEARINE.—The compound lard business continues dull. There is little question but that the distributors of the compounds would freely buy them if they felt that "bottom" prices had been touched, since their prices would be more than usually favorable of pure lard. But the distributors of

avorable with consumers compared with the the compounds think that cottonseed oil is likely to go still lower and that manufactured goods from it will be had for less money. The fact then of the indifference in the compound lard business restricts the demands for the oleo stearine to just such supplies of it as are needed for near future use. And the absence of vitality to the stearine market keeps it at easy prices. There are sellers in New York of the stearine at 6½c., and in Chicago at 6½c. Sales are 50,000 pounds in New York at 6½c. and 200,000 pounds in Chicago at 6½c.

LARD STEARINE.—The lard refiners wants are light, as the continent lard business is moderate. About 7½c. quoted for the stearine.

OLEO OIL.—The Dutch markets are slow in trading, as usual about this time. Most of the butterine makers have fair supplies for the present. Rotterdam quotes at 54 florins, New York at 9½c. for choice, 7½c. for prime and 6c. for low grade.

COTTONSEED STEARINE.—Foreign markets seem to make contracts pretty well ahead for the supplies here. Double pressed quoted at 32c. per gallon.

GREASE.—Exporters are buying moderately, and there is beginning more of an inquiry for supplies from home trade sources. Sales have been 100,000 pounds yellow at 4c.; yellow at 3½c. to 4½c.; house at 4½c. to 4½c.; bone at 4½c. to 4½c., and choice to 4½c.; "B" white at 4½c. to 4½c.; "A" white at 5½c. to 5½c.

GREASE STEARINE.—Holds up well in price, as supplies are only moderate. Demands are better for yellow, which is scarce. Yellow quoted at 4½c. to 4½c., and white at 5½c.

COCOANUT OIL.—Consumers take up the offerings of supplies here rather promptly, and the market has a fairly firm undertone. Ceylon, spot, 6½c., and January to March shipments at 6½c. to 6½c.; do., January and February arrivals, at 6½c. to 6½c.; Cochiti, spot, 7½c. to 7½c.; do., January and February arrivals, 7½c. to 7½c.; do., January to March shipments, at 7½c.

PALM OIL.—The tone of the market is fairly firm, with the moderate supplies on offer. Red, commercial, at 5½c. to 5½c.; Lagos at 6c.

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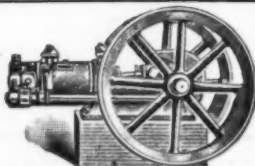
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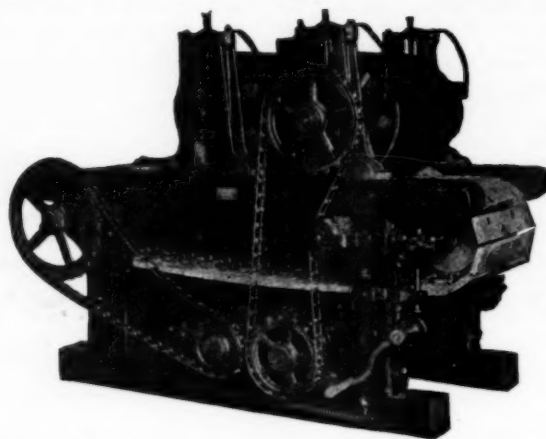
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CHICAGO, U. S. A.

CORN OIL.—The market has a slack look on export account, and is at rather weak prices, as experienced by the weakness in some other oils. Quoted at \$3.35 for car lots to \$3.40@3.50 for jobbing quantities.

NEATSFOOT OIL.—There is more doing in the best quality of cold test. A generally firm market; 20 cold test at 97@98c.; 30 do., at 86c.; 40 do., at 62@63c.; prime at 49@50c.

Watch page 48 for chances to pick up good men in all departments of the packing-house business.

LIVESTOCK CONVENTION AT DENVER.

The annual conventions of the National Livestock Association, the National Woolgrowers' Association and affiliated bodies are set for Denver, beginning on Monday. There will be a big gathering of stockmen from all over the country. An effort is to be made to reorganize the National Association and put it on a practical basis, where it may co-operate with the packinghouse and other industries, instead of antagonizing them. It is understood that several representative packing-house men from Chicago will attend the conferences at Denver for that purpose.

COTTONSEED OIL

WEEKLY REVIEW

THE NATIONAL PROVISIONER is an official organ of the Interstate Cottonseed Crushers' Association, and the official organ of the Oil Mill Superintendents' Association of the United States.

Continued Market Depression.

While the market in New York on the closing day of December became a little steadier through reason of protecting a few contracts over the holidays, and that on the beginning of business on Tuesday morning the steadiness in prices was held, yet before the close of Tuesday the resumption of depression from the basis of supply and demands was apparent, and the market for the present continues in favor of buyers with some little demoralization to it. The point that has been made for some time that "bottom" to the market would be touched only when demands improved in a material degree from home consumers and exporters is still uppermost for consideration. There has been and is now too much oil everywhere, except as it will be needed in the future, while there are liberal holdings of the crude, especially in Texas. The whole position is additionally bothered, and made somewhat irregular by the continued scarcity of tank cars to move the oil, in conjunction with the continued indifference among compound makers and foreign markets to take liberal supplies of it. Meanwhile the seed supplies are had at steadily lower prices, and they are bought up rather freely. It could be said that because the mills are holding liberal supplies of crude oil, and that they are unable to move them out at all freely, that the oil productions might be in some degree from this along hindered by the circumstances, particularly in consideration of the low prices, by comparison, for the oil. But the fact of the matter is that seed prices are gradually getting down to a basis to induce buying of the seed promptly, particularly as the oil cake is selling at good prices; moreover, that the oil cake is likely to have

more urgent demands very shortly because of the cold weather in Europe and the need thence of getting feedstuffs forward. Therefore, that the prices of the oil cake go a long way in giving profits to the mills on their productions, and that the prices of the oil have rather less consideration than usual. The feature of the holdings of the oil by speculators, particularly by the people who have dipped into trading in it for the first time this season, and who have not, as yet, unloaded very materially, but who, some of them, are becoming a bit disgusted with their "long" holdings and may at any time dump them, makes the position of the market an added feverish and uncertain one. It must be considered, as well, that the pressure of refined oil has not, as yet, been fully felt. It is more the fact that there have been, and are, large supplies of crude oil that have been the menace, and the ability or inability to sell the refined oil as it comes upon the market, will determine the future situation as to prices. As it looks now the prospects are not favorable for steadier situations of the market for the near future, but rather they point to still lower prices, or to a selling basis at which confidence would be invited for liberal buying by the compound makers and exporters. It now appears as if the oil market would touch the inside prices, or close to them, as referred to in our previous review as made in '97 and '98, before the consumers feel that "things are cheap."

The consumers and exporters have the advantage this season in being impressed with the belief that it is a "low trading price year," and they are holding off for every advantage to them from the prospects of productions of fats from the corn and cotton crops. And while ordinarily current prices

would be considered a safe buying basis, over which they would feel comfortable, and buy freely, yet this season none of them want to be left over possibilities or to have their competitors secure supplies at a less price than may be possible with them. When the turning point comes we look for large demands.

Speculation in New York.

There was a break in the New York market on Wednesday of about a half cent for the refined, after a closing weak market on Tuesday, and there was then some disposition to test a selling basis by some of the speculative holders. There was not much done by these speculators because it was realized by them that there would be a "stand from under time" if their oil contracts were crowded for sale. The more the market goes down the more demoralized the opinions of the traders in it. It is hard to get a buyer except as he has a profit on a "short" sale; and he takes just enough to cover it. The market, however, has arrived at that point where there is reluctance to sell it "short," however popular the feeling is that it will go still lower, and that wagers were made it would yet touch 20c. for refined, although, of course, as to the probability of the market touching that price one man's opinion is as good as another. At the same time it is quite certain that no one cares further to take the "long" side of the market. The "long" speculator, as a whole, feels that he has got all that he cares to carry from his old investing at higher prices, and "wishes he hadn't," in consideration of the present demoralized situation of affairs, and the look ahead of large supplies. When "bottom" is touched for cotton oil we look to see an extraordinarily large business from

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AWARDED
BUFFALO, 1901
CHARLESTON, 1902

all consuming sources, and as it is likely to be attracted by the low prices, and which will make good competition with the values of other soap oils, as well as with the prices of manufactured goods that compete with pure lard in the trading with consumers. The New York market on last Saturday was rather firm. Sales then of 100 bbls. prime yellow, January, at 22½c., and 100 bbls. do., July, at 25c.; prices then, January, 22½@23c.; February, at 22½@23½c.; March, at 23@23½c.; May, at 23½@24½c.; July, at 25@25½c.; September, at 25½@26c. Monday, a holiday. On Tuesday a steady market early, but late in the day some pressure to sell at easier prices. Sales, 1,000 bbls. prime yellow; July, at 25c.; 250 bbls. do. at 25½c.; 200 bbls. do., January, at 22½c.; 200 bbls. do., February, at 23c.; prices early in the day: January, at 22½@23c.; February, at 22½@23½c.; March, at 23@24c.; May, at 24½@24½c.; July, at 25½@25½c.; September, at 25½@26½c., and on the last "call," January, at 22½@23c.; February, at 22½@23½c.; March, at 23½@24c.; May, at 24½@24½c.; July, at 25@25½c.; September, at 25½@26½c. On Wednesday the disposition to sell was more urgent, and the market early in the day was fully ½c. lower; sales then, 100 bbls. prime yellow, January, at 22½c.; 300 bbls. do., May, at 23½c.; 100 bbls. do. at 23½c.; 100 bbls. do., July, at 24½c.; 100 bbls. do., July, at 24½c.; 1,000 bbls. do., April, at 23½c.; 1,000 bbls. do., September, at 25c.; prices then: January, at 22@22½c.; February, at 22½@23c.; March, at 22½@23½c.; May, at 23½@24c.; July, at 24½@24½c.; September, at 25@26c., and on the last "call" still easier prices for the late deliveries, with sales of 200 bbls. prime yellow, January, at 22½c.; 1,000 bbls. do., May delivery, at 23½c.; 1,000 bbls. do., July, at 24½c.; prices: January, at 22@22½c.; February, at 22½@23c.; March, at 22½@23c.; May at 23½@23½c.; July, at 24½@24½c.; September, at 25@25½c. On Thursday the market suffered another decided decline early in the day, with few buyers and marked depression: prices then on the "call": Jan., at 21½@22½c.; Feb., at 21½@22½c.; March, at 22@22½c.; May, at 22½@23½c.; July, at 23½@24c.; September, at 24½@25c.; sale 100 bbls. March at 22½c., but after the "call" 1,700 bbls. sold for May at a decline to 22½c., and 1,500 bbls. do. at 23c., and 200 bbls. July at 23½c., and January offered at 22c. In the afternoon trade firmer market; sales 200 bbls. January at 22c.; 600 bbls. July, at 23½c.; 1,500 bbls. do., at 24c.; prices then on the "call": January, 21½@22c.; February, at 22@22½c.; March, at 22½@23c.; May, at 22½@23c.; July, at 23½@24c.; September, at 25@25½c.

(Friday's list of sales and prices will be found on page 42.)

Contract Deliveries.

There is considerable refined oil being delivered this month in New York on contracts—thus far about 7,000 barrels tendered; fortunately most of it goes to people who can take care of it, since the outside speculators will not have deliveries made to them of any consequence before March; indeed, most of their speculations are in May, July and September. There are about 8,000 barrels more of the oil due on the January contracts.

Position at the Mills.

The mills, many of them, have met a further small decline in prices, with sales down to 16c. in the Southeast for crude, in tanks and to 15c. in Texas, and in all 40 tanks sold in the Southeast at 16@16½c., and 30 tanks in Texas at 15@15½c. At these prices the mills have been pretty well in line with the seaboard markets for the refined. But the trouble is that the mills are not able to sell freely on the difficulty in getting tank cars, and the lack of confidence among the refiners, large or otherwise, even of current prices. Later sales of 40 tanks in the Southeast at 16c. for February and March and a small lot, prompt, at 15c.

Foreign Markets Demands.

The exporters who dip in spasmodically for limited quantities of the oil become disheartened as the market steadily finds a new level of low prices. There is no question of a large export business for the season, but it will not be begun at all freely until the market is seemingly settled, or at a time that it may appear to be on a turn. Low prices are, of course, necessary for more than the ordinary export business, and a larger than ordinary export business must be had in consideration of the productions, which now essentially all traders con-

cede as likely to reach the figures of 3,000,000 barrels crude, which we had regarded some time since, as is well understood, as a probable development of the season's productions. At such prices as will rule for the cotton oil there is little doubt but that the other soap oils of Europe will have freer competition from cotton oil this season than usual. It is somewhat singular that Marseilles, as yet, is very indifferent to our cotton oil market, but it is believed that Marseilles is only waiting for a more secure market in this country, although, of course, Marseilles has not been of the old-time importance as a buyer here of the cotton oil in several seasons. As yet the Rotterdam market has been the chief buyer, and the record of shipments to it for the season thus far, as will be noted by our export tables, has been considerable. Some of the olive oil countries have bought moderately, but not, as yet, up to expectations considering the short olive crop. Within two weeks hardly more than 10,000 barrels refined have been taken in New York for export, and most of this has been of edible oils at 24@26c. for white, chiefly at 24½@25c., and of winter yellow at 27c.

Compound Makers' Demands.

The lower prices for the week fail to start up demands from the compound makers, who have either protected their needs from two or three weeks before executed contracts, or are waiting before buying for a turn from the current depression. The compound makers would not be at all hurried in buying the oil because of the dull condition of business in the compound lard. The buyers of the compounds look at the condition of the oil market and see no reason to stock up freely with the compounds and although the prices of the compounds have been reduced this week to 4½@4¾c. for car lots, while the prices of pure lard are relatively higher than ordinarily, although the lard market has be-

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come weak. There is a spiritless feeling to the situation generally. Bleaching grade of the oil in New York in tanks, is at about 22c., and at the West nominally about 20½c. after a sale of 20 tanks at 21c.

Soapmakers' Consumption.

There is now more cotton oil being used by the soapmakers than ordinarily; nevertheless, the soapmakers are not buying much ahead of near needs for consumption. It rather looks as if the soapmakers were becoming more stirred in their interest in cotton oil, more particularly those at the West, and that larger contracts would be made by them for supplies of the oil, if they had become convinced that the inside trading basis had been touched. An increased business would probably come from the soapmakers in the oil, not only because the oil is relatively much lower than usual as compared with the cost of tallow and grease, but because the tallow and greases have been pretty closely brought up steadily, over the West, particularly, and that it is doubtful if much of an accumulation can be made of them in January, although that the livestock receipts will then, likely, steadily enlarge, and which would seem to favor at length easier market conditions for buyers.

Oil Cake at the South.

Just now there is a slackening of export demand at the South for oil cake, but there are very fair prices being made for the product. There is reason to expect quickened foreign demands for the cake, as the weather in Europe has been of a severe order. A late quoted price in New Orleans was at \$24.50 per ton along ship, but this price is now probably a little high, as it is understood that Galveston now quotes at \$22.75. Later in the week New Orleans submitted to a decline to \$24. and sold 3,000 tons at that for export.

The Seed Position.

The mills are now getting some of the lower priced seed, quotations for which were made only recently. It is now understood that in some sections of the Southeast the price of seed has come down to \$10 per ton.

Lard Market Outlook.

It is becoming even more probable that the lard market will keep in buyers' favor. As said last week it would be hard to see with the current cheap prices for cottonseed fat how the late expected bull movement in pure lard can materialize. The prices of compounds are too cheap, while that they are likely to be lower, for a belief now that the pure lard market could be taken hold of for more than temporarily better prices. On the contrary, it rather looks as if there would be an upset lard market partly through the cottonseed fat influence and partly from the fact that the stocks of the lard are beginning to increase and that buyers of it, particularly those on European account, are holding off for more settled all around fat market conditions. The world's visible supply of lard increased materially through December.

COTTONSEED OIL SITUATION.

(Special Letter to The National Provisioner from Aspegren & Co.)

New York, Jan. 5.—Since our last circular of December 29 market here has continued to ease off. Late on Saturday there was a sudden reaction of about ½c., but the advance proved short-lived, and market was again easier when it opened after the holidays. To-day's prices closed all around at about the lowest level of the season. Of the sales made, refiners have been the principal sellers and speculators the buyers. The demand from Europe continues only small, most of the bids being made at below present market values here.

Crude oil has also suffered by the decline, prices in Texas being 15@15¼c., and in the Southeast 16c. asked, the lowest sales being at 16c. for February, with 15½@15¾c. bid for January. The position of January crude has been aggravated by the fact that very few refiners have any tank cars to spare for January, and are therefore unable to bid for that delivery.

Closing prices to-day were as follows: Prime summer yellow cottonseed oil, January, 22c. sales; February, 22c. bid and 22½c. asked; March, 22½c. bid and 23c. asked; May, 23c. sales and bid; July, 24c. sales; September, 25c. sales and bid.

We further quote: Prime winter yellow cottonseed oil, 26c.; prime summer white cottonseed oil, 25c.; Hull quotation of cottonseed oil, 14s. 1½d.; prime crude oil in tanks in Southeast, January, 16c. asked; February, 16c. sales.

SOUTHERN MARKETS

Dallas.

(Special Wire to The National Provisioner.)

Dallas, Tex., Jan. 5.—Market very quiet; sales light. Prime crude, 15@15½c. Meal, \$18.50@18.75 f. o. b. mill.

New Orleans.

(Special Wire to The National Provisioner.)

New Orleans, La., Jan. 5.—Small lots of Texas prime crude offered to-day at 15c. f. o. b. mill; 14½c. bid. Louisiana and Mississippi offering at 15½c. The undertone is weaker. Cake and meal are easy at \$23.75 @24. long ton, ship's side, January, February and March. Hulls are unchanged.

Atlanta.

(Special Wire to The National Provisioner.)

Atlanta, Ga., Jan. 6.—Oil market weak; January, 15c.; February and March, 15½c. Meal easy, \$20.50 and \$21. Hull dull, \$5.25, loose; \$7 to \$7.25 sacked.

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of the

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CABLE MARKETS

Hamburg.

(By Cable to The National Provisioner.)

Hamburg, Jan. 6.—Cottonseed oil market is very much depressed and hard to quote accurately, in sympathy with the depression in America. Buyers are holding off. Off grade summer yellow is at about 29½ marks, prime summer yellow at about 31½@32 marks, and butteroil at 34½@35 marks.

Marseilles.

(By Cable to The National Provisioner.)

Marseilles, Jan. 6.—Cottonseed oil shows a demoralized market, and all buyers holding off for settled conditions at the producing and exporting markets. Entirely nominal situation of prices and about 2½ francs lower for the week. Prime summer yellow quoted nominal at 36½ francs for January, and winter oil at about 42 francs.

Rotterdam.

(By Cable to The National Provisioner.)

Rotterdam, Jan. 6.—Cottonseed oil market shows depressed conditions. Considerable supplies are on the way and further demand pauses for more regular market conditions. Nominal prices are about 17@17½ florins for

summer yellow, and about 19@19½ florins for butteroil.

Trieste.

(By Cable to The National Provisioner.)

Trieste, Jan. 6.—Cottonseed oil market is lifeless and entirely nominal as to prices, while buyers would have a decided advantage. Any quoted prices must be considered nominal, say at about 38½ francs for prompt delivery and around 40 francs for forward delivery, with winter oil at about 44 francs.

Liverpool.

(By Cable to The National Provisioner.)

Liverpool, Jan. 6.—Cottonseed oil market is depressed and dull, and about one shilling lower for the week, with 14s. 6d. quoted nominal for prompt delivery, with off grade at 14s. 3d. c. i. f. English ports.

COTTONSEED OIL EXPORTS

Exports of cottonseed oil for the week ending January 5, and for the period since September 1, 1904, were as follows:

From New York.		
Port.	For Week.	Since Sept. 1.
	Bbls.	Bbls.
Aberdeen	—	50
Acajutla	—	25
Adelaide	—	53
Alexandria	—	1,235
Alga Bay	9	9
Algiers	—	3,302
Ancona	—	250
Antigua	—	76
Antwerp	130	1,051
Auckland	—	35
Barbados	—	335
Bergen	—	150
Bone	—	360
Bordeaux	475	1,670
Bridgetown	—	248
Bristol	—	10
Buenos Ayres	253	965
Calbarien	—	10
Cape Town	45	170
Cardiff	—	10
Cayenne	—	51
Christiania	—	251
Christiansand	—	25
Colon	27	234
Conakey	—	35
Copenhagen	—	1,700
Corinto	—	96
Danzig	150	1,800
Delagoa Bay	—	21
Demorra	—	421
Dublin	—	76
Dunkirk	—	230
East London	—	115
Flume	—	1,800
Port de France	—	569
Fremanthe	—	58
Galatz	—	450
Genoa	—	14,122
Georgetown	—	124
Gibraltar	—	200
Glasgow	—	600
Gothenberg	—	796
Guadaloupe	—	1,304
Guayaquil	—	45
Hamburg	—	2,247
Havana	45	543
Havre	425	9,324
Hong Kong	—	54
Hull	—	190
Klingston	35	1,056
Konigsberg	100	800
La Guaira	—	497
Leghorn	—	1,959
Liverpool	580	2,282
London	140	805
Macoris	—	966
Malmo	—	6
Malta	—	654
Manchester	—	210
Maracaibo	—	6
Marcellies	3,125	16,778
Martinique	—	739
Massowah	—	19
Matanzas	—	10
Melbourne	—	281
Montego Bay	—	58
Montevideo	145	2,295
Naples	—	1,955
Newcastle	—	10
Oran	—	1,704
Philippville	—	153
Port Antonio	—	94
Port au Prince	—	34
Port Limon	—	18
Port Natal	—	170
Porto Cabello	—	7
Port of Spain	—	25
Port Said	115	340
Progreso	—	19
Puerto Plata	—	30
Rio Janeiro	—	1,506
Rotterdam	—	4,705

St. Kitts	—	555
St. Thomas	—	8
Santiago	—	24
Santos	—	758
Shanghai	—	19
Sierra Leone	—	10
Singapore	—	76
Southampton	—	400
Stavanger	—	230
Stettin	100	2,075
Stockholm	50	390
Sydney	—	478
Tangier	—	150
Trieste	1,300	10,932
Trinidad	—	781
Tunis	100	116
Valetta	—	715
Valparaiso	—	1,007
Velle	—	200
Venice	1,800	10,967
Vera Cruz	—	46
Wellington	—	70
Totals	9,149	118,521

From New Orleans.

Antwerp	750	3,400
Belfast	—	450
Bremen	—	1,098
Copenhagen	60	955
Genoa	—	301
Glasgow	—	2,258
Hamburg	—	6,438
Havana	250	471
Havre	60	910
Hull	250	550
Liverpool	1,275	2,775
London	70	2,580
Manchester	250	250
Marcellies	—	2,825
Rotterdam	—	41,090
Trieste	2,816	10,050
Totals	5,781	76,401

From Baltimore.

Antwerp	—	230
Bremen	120	120
Bremerhaven	—	260
Copenhagen	—	805
Hamburg	—	100
Havre	—	200
Rotterdam	—	2,850
Stettin	—	530
Totals	120	5,005

From Galveston.

Antwerp	—	2,680
Hamburg	—	680
Rotterdam	9,420	31,195
Trieste	—	90
Vera Cruz	—	6,534
Totals	9,420	41,179

Newport News.

Hamburg	—	5,329
Liverpool	500	1,377
London	—	146
Rotterdam	—	4,691
Totals	500	11,543

Recapitulation.

From New York	9,149	118,521
From New Orleans	5,781	76,401
From Galveston	9,420	41,179
From Baltimore	120	5,005
From Newport News	500	11,543
Grand totals, all ports	24,970	252,739

PENNSYLVANIA FOOD AMENDMENTS.

The food authorities of Pennsylvania have prepared the amendments to the food laws of that state, which they will seek to have the present legislature adopt. These amendments are intended to be more drastic than ever as regards food preservatives, but some marked favoritism is to be shown. For instance, borax and boracic acid are to be barred entirely in meat preparation, and oleomargarine is put under an even stronger ban, while coloring matter will be allowed in candy, butter, ices, etc., and the adulteration of liquors will not be prohibited.

One of the bills is designed to stop the sale of inferior and tainted meats, adulterated with drugs and chemicals to make them more attractive. It is proposed to amend the present law so as to prohibit the use of coloring matter and materials in all meats, poultry, fish, shell fish and game sold as

"fresh." Ice and refrigeration will be the only forms of preservation allowed. The use of saltpetre, salt and sugar will only be permitted in canned or cured meats.

The proposed legislation will permit of the use of harmless coloring matters in confections and certain other articles of food, such as butter, ices, icings and frostings. The law governing the adulteration of liquors will be amended to allow burnt sugar, or caramel, to be used in distilled liquors.

There will be a bill to repeal the act of 1903 allowing the use of borax in meat preservation. Since the enactment of this law the Federal and State experts have decided that boracic acid is harmful, and it is the purpose of the State officials to prohibit its use as a preservative of food in any form.

IMPROVEMENTS IN REFRIGERATION.

(Concluded from page 26.)

tower are supplied with what are practically a system of Venetian blinds on a large scale. These blinds are placed between the supports of the tower. Each slat is a seven-eighths-inch board, eight feet long and eight inches wide. These slats or boards have a casting screwed to each end of the board, and the casting forms a pin which is inserted into a hole or journal in another casting screwed to the tower supports. A strip is placed vertically on each section of slats running from top to bottom and stapled loosely to each slat. In this way any section of blind can be closed tightly or opened to any degree, just as a Venetian blind is handled. When the wind is light, the slats are set in a horizontal position and absolutely no obstruction to the air is offered. If the wind increases they can be adjusted accordingly, so that at all times the maximum circulation of air can be realized without losing any water by blowing off. All connections are loosely made so that the boards or slats may shrink or swell without binding.

These are a few of many improvements that are coming along, some turning out well, and others found wanting.

**WANTED AND
FOR SALE
ADVERTISEMENTS**
PAGE 48

JULIAN FIELD
Broker in Cottonseed Products
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COTTONSEED OIL
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Builders and Dealers in ENGINES, BOILERS, Tanks, Stacks, Standpipes, etc.; Bridge and Architectural Iron Work; Railroad, Cotton, Saw, Fertilizer, Oil and Ice MACHINERY and Supplies and Repairs; Shafting, Pulleys, Hangers, Leather and Rubber Belting and Hose; MILL SUPPLIES and TOOLS; Foundry, Machine, Boiler and Bridge Work. Capacity for 300 hands.

HIDES AND SKINS.

(Daily Hide and Leather Market.)

Chicago.

PACKER HIDES.—The market shows more activity, particularly in branded hides, which are very firm. Native steers, however, continue dull and easy. Several of the packers are offering December native steers freely at 13½c., but no sales have been made, as buyers' views are not over 13½c. for good sized lots of early December salting. There is a stronger market on Texas steers. One leading packer has sold his Ft. Worth and possibly his St. Louis Texas at 14c. for heavy, 13c. for light and 12c. for extremes. This is ¼c. more than the prices secured on previous sales of Texas. The same packer also sold his branded cows at the above points ahead at 12c., and is not offering any more branded hides at present, as he sold his Colorados ahead last week to January 20 at 12½c. A prominent packer has sold a car of heavy Texas ahead at 13½c. and a car of light and extreme Texas ahead at 12¾ and 11¾c., respectively. The market on butt brands is firm. One large packer has sold two cars of December and early January butt brands at 12½c., and other packers have light offerings of these. Colorados are firm at 12½c., with no further sales reported to-day. One prominent packer has about 5,000 branded cows which he is holding firm at 12c., but as other packers are sold ahead at this price they have practically nothing to offer. The market on heavy native cows shows a steadier tone, and a leading packer is reported to have cleaned out his December heavy cows at 12c. as part of the combination sale, including Texas and branded cows reported above. These sales have had a somewhat strengthening effect on the entire market. Light native cows continue quiet with packers offering at 11¾c. and buyers showing no interest at this price. There is a good inquiry for native bulls, with only limited holdings. Some native bulls are offered at 10½c., while other lots that run back into October salting are held at 11c. A leading packer has sold 1,000 branded bulls at 9½c.

COUNTRY HIDES.—The market continues strong, and there is a large demand from Boston and other Eastern points. Tanners are bidding 9¼@10c. selected for buffs, but most dealers are declining to sell buffs at under 10¼ and 9¼c., as they have plenty of old orders unfilled yet to ship of lots sold at 10¼@10½c., and also sales of a week or so ago at 9¾@10c. One buyer, however, has secured several cars of buffs from Chicago dealers for January delivery at 10c. and 9c. One local dealer has sold 2,000 or more 50 to 60 lb. cows at 10¼ and 9¼c., and this dealer also sold a car of 40 to 50 lb. cows at 10¼ and 9¼c. Tanners are bidding all through the country for hides, which is making competition keen. The small supply of packer branded cows is the underlying cause of the strength in the country market. No sales are reported of 60 lb. and up heavy cows. Some lots of heavy cows are being offered at 10½ and 9½c., but other lots are held firm at 10¼ and 9¼c. One of the local dealers has made a sale of 4,000 extremes at 10¼ and 9¼c., which prices represent the market, although some dealers are still talking 10½ and 9½c. Heavy steers are quiet, with several cars being offered at 11½c., selected,

without takers. Bulls continue firm at 9 and 8c.

CALFSKINS.—The market on Chicago city skins continues to be quoted at 14¼c., but the situation is not firm at this price, as it is learned that one local dealer recently sold his Chicago city skins at 14¼c. Choice outside city skins are being held at 14¼c., but some sales have been made at outside points at 14¼c. Country skins continue to rule at 14@14¼c., according to lots, and present receipt kip are quotable at 11½@12c.

SHEEPSKINS.—Nelson Morris & Company are offering their packer sheep at \$1.82½, which were formerly held at \$1.85. Buyers, however, are not inclined to operate except at considerable concessions from asking prices. In the absence of sales the packer market continues nominally quotable at \$1.77½@1.82½ for sheep and \$1.57½@1.67½ for lambs. Country skins are also quiet, with prices ranging from 90c.@\$1.45.

New York.

DRY HIDES.—No further sales are reported to-day, but it is thought that recently arrived Orinocos and Bogotas will soon be taken at unchanged prices.

CITY SLAUGHTER HIDES.—No sales have been made to-day by the regular packers, but some lots held by outside butchers are under negotiation and will probably be moved soon.

COUNTRY HIDES AND CALFSKINS.—The market on hides continues firm, with New York State cows and light bulls quotable at 9¼@10c. flat. One car of New York State cows has been sold at 9¼c. flat, but most dealers are not willing to sell under 10c. flat. Heavy bulls are mostly selling at 8½c. flat, and car lots will bring 9 and 8c. selected. No sales of New York city calfskins have been reported this week, and the market on these continues quotable at \$1.30, \$1.60 and \$1.80, with kips at \$2.35 for 12 to 17 lbs., and \$2.75 for 17 lbs. and up. There are very limited supplies of country calfskins, and the small lots of these that are offered find ready buyers at unchanged prices.

THE DRYING OF COAL.

(Concluded from page 22.)

the subject, however, is distinct by itself and cannot be treated in this paper.

This coal question is, however, very important, and has very much to do with the building up of our future. Some of our large factories in Cleveland, Pittsburg and other large cities, are using more than 50 tons of coal an hour for fuel in one department. This means a whole lot of mining, railroading, etc., and produces a very large amount of material in the form of steel and iron, afterwards to be worked up into different machinery.

Coal to be satisfactorily and economically pulverized should first be thoroughly dry. To get the best results from grinding machinery there should not be more than 1 per cent. moisture in the coal. The grinding capacity of mills is nearly double on coal of 1 per cent. moisture to what it is with moisture of 2 per cent. There can be no set rule to be followed in drying coal, as it is rarely that we find two lots of coal which will dry alike. Some coal will give up its moisture easily and freely, and other grades will apparently grow wetter as they grow hotter. Within the past six months we have been called upon to dry in one dryer coal from which we could remove 8 per cent. moisture at the rate of 15 tons per hour, and other coal from which it was impossible to remove more than 6 per cent. at the rate of 8 tons per hour. We have seen coal which has lain under cover for two months develop from 6 per cent. to 8 per cent. moisture on being heated, and put into the storage bins, and have seen water run in a stream from the hopper.

From the best determinations we have been able to make it seems that the coal in which the ash is composed largely of silica will give up its moisture easily and thoroughly, while that in which the ash is high in lime or clay is very difficult to dry, and the moisture really has to be sweated out.

It is very important that coal be handled in such a way that warm air in large quantities can be brought in contact with every particle of it and can be made to absorb the moisture and carry it off as fast as it is released. This is best accomplished by passing the currents of air from the dried material through that which is wet. Furthermore, the currents of air should be subject to regulation in order that the heat will not become so intense as to release any of the volatile matter.

There is no question but what there is always a certain amount of risk in drying coal, but this can be reduced to a minimum by using the proper precautions. The first and greatest precaution is not to get the idea that "any old thing" is good enough to dry coal. One notable experiment of this kind in the East during the last year cost the lives of seven men besides a large loss of property. Another point, do not use a machine in which particles can get caught, for they are liable to ignite if held in contact with a heated surface for any length of time. Do not use a dryer whose rated capacity is just enough to supply your needs. Better with this as with all other machinery, to have it large enough to be able to do a little more, than to be obliged to force things on regular work.

Still another point: It is never safe to pass the products of combustion through the drying coal. With some coal it might be done, and in fact has been done with coal of 54 per cent. volatility. It is best, however, to stay on the safe side and not sacrifice safety for efficiency. It is generally safe to estimate on evaporating from six to eight pounds of moisture to one pound of coal, or its equivalent used for fuel. I have heard of evaporating as high as 12 lbs. of moisture with one pound of coal, but I have the best of reasons to doubt it.

It is difficult to tell at just what temperature coal will begin to give off gas, and indeed this point varies with different coal, but it is generally safe to say that it can be delivered from the dryer at about 150 degrees Fahrenheit without loss of gas. We have been asked to discharge at 225 degrees, and have found that this can be done, but not without loss of a small percentage of gas, and this cannot be recommended as good practice.

It is necessary to use a fan-blast to get sufficient air to carry off the moisture, and this will carry the dust produced by crushing with it. This dust amounts to from 3 to 5 per cent. of the total amount and is worth saving. This is accomplished by placing the fan-blast above the receiving hopper, using suction on the cylinder and forcing the dust and moisture into a settling chamber, made of non-conducting material, preferably brick. The wall of this chamber will retain sufficient heat to prevent the moisture from condensing, and should be large enough to allow the dust to settle. The bottom of the settling chamber should slant at least 45 degrees to the center, which will cause the dust to slide to the middle, where it can be carried off, either by screw or chain conveyor.

CARROLL S. PAGE, HYDE PARK, VT.

Green Calfskins, Country Hides, Sheep
Felts, Tallow, Bones.

Wool Puller and
Tallow
Renderer

Manufacturer of
Page's Perfected
Poultry Food



CHICAGO SECTION



"Iowa's Pride," say John Morrell & Co., of Ottumwa.

A. J. Morris, Amarillo, Tex., is making good headway with his packinghouse project.

"The Best in the West," says the Morton-Gregson Company, of Chicago and Nebraska City.

Ho! for the water wagon, and we'll all take a ride. Look out and avoid head-on collisions.

The Board of Trade celebrated the close of the year with a vaudeville show, making \$1,000 for charity.

Swift & Company's sales of fresh beef in Chicago for the week ending Saturday, December 31, 1904, averaged \$.0595 per pound.

Everyone is pleased that these holiday times are over. Got through wishing everyone a Happy and Prosperous New Year; now lets try and make it one.

Contracts have been let for the new soap factory to be built at 31st and Benson streets, for Armour & Company. The entire cost of construction will be close to \$400,000.

Jas. B. Clow & Sons secured the rearranging of the heating apparatus in Swift & Company's Halsted street branch. This building is likely to be reconstructed at no distant date.

William Burton, twenty-six years old, employed in the stables of J. Ogden Armour, at No. 3724 Michigan avenue, was found dead in bed Tuesday. Heart disease is supposed to have caused death.

The Chicago butter and egg board has amended its constitution and by-laws in such a way as to shut out makers of oleomargarine and butter substitutes. The amendment bars all oleo makers from joining that association, but it does not exclude those already members from its membership.

Mr. F. Rayfield, who has charge of Swift & Company's fertilizer department, will retire about January 15, to go into business on his own account in Kansas City. Mr. Rayfield has the best wishes of everybody. Mr. A. H. Pettit will succeed Mr. F. Rayfield as manager of Swift & Company's fer-

tilizer department. Mr. Pettit has been a long time in the department, and is a thorough and highly esteemed business man.

The management of the Lake Shore road was sufficiently thoughtful to hit upon a scheme to remind travelers of the holiday season. All parlor, dining and observation cars on this system were decorated with milax, vines and flowers on Christmas and New Year's Days, the idea of the management being to make the season as pleasant as possible for those who are forced to be away from home at this time of year.

In the issue of December 24 The National Provisioner gave the credit for the invention of the Albright-Nell Company's "Ideal" belly roller to Mr. James Cuning, of Indianapolis, which was an error. The machine is the invention of Mr. J. A. McClean, superintendent of the Fowler Packing Company, Kansas City, widely and favorably known in practical packinghouse circles. The mention of Mr. Cuning in this connection is excusable in view of the fact he has invented so many useful and valuable machines for the packinghouse.

Fire losses at the Union Stock Yards have been comparatively light this year, but the packers have been paying more for their insurance because of the new packinghouse schedule, adopted because of previous fires. Last week the packers sent a letter to the executive committee of the Chicago Underwriters' Association asking that rates on their properties be reduced, because of the favorable experience. Some members of the committee were inclined to think that a sufficient reduction would be secured if the improvements called for in the schedule were made. The packers think they ought to have more reduction than this will give them.

The Kenwood Trust & Savings Bank, organized by Swift interests and others, with a capital of \$200,000, opened January 3 at 47th street and Grand Boulevard. A. K. Brown is president, D. E. Hartwell, vice-president, and Frank Collins, cashier. The directors are L. A. Goddard, president of the Fort Dearborn National; W. A. Tilden, cashier of the Drovers' Deposit National; S. A. McClean, president of the National Packing Company; J. L. Kesner, manager of the Fair; D. E. Hartwell, secretary of Swift & Company; F. A. Fowler, of Swift & Company; S. M. Dal-

zell, H. W. Hardy, of Libby, McNeill & Libby, and A. K. Brown. The organizers first applied for a charter for a national bank, but later decided that a State bank would better serve the purposes of the neighborhood.

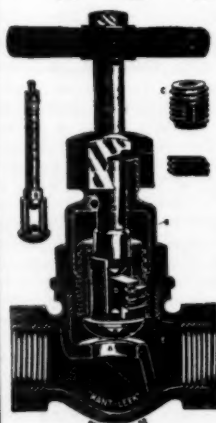
In its annual report the Chicago Union Stock Yards and Transit Company shows that the value of live stock received at the yards during the year 1904 was as follows: Cattle, \$149,192,290; calves, \$2,274,677; hogs, \$79,626,206; sheep, \$18,428,319; horses, \$14,303,115. The valuation of live stock received direct by packers outside the yards during 1904, not included in the total of \$264,124,607, was \$7,176,232, making a grand total of \$271,300,839. The report also shows the valuation of live stock received at the yards for the thirty-nine years of its existence to be as follows:

Year.	Valuation.	Year.	Valuation.
1866.....	\$42,765,328	1886.....	\$166,741,754
1867.....	42,375,241	1887.....	176,644,597
1868.....	52,506,288	1888.....	182,202,789
1869.....	60,171,217	1889.....	293,321,924
1870.....	62,090,631	1890.....	231,344,879
1871.....	60,331,082	1891.....	239,434,775
1872.....	87,500,000	1892.....	253,836,502
1873.....	91,321,162	1893.....	249,542,377
1874.....	115,049,140	1894.....	228,153,029
1875.....	117,533,942	1895.....	200,584,380
1876.....	111,185,650	1896.....	187,745,655
1877.....	99,024,100	1897.....	216,305,396
1878.....	106,101,879	1898.....	229,301,296
1879.....	114,795,834	1899.....	233,711,180
1880.....	143,057,626	1900.....	262,154,272
1881.....	183,007,710	1901.....	283,955,239
1882.....	196,670,221	1902.....	312,884,386
1883.....	201,252,772	1903.....	288,152,707
1884.....	187,287,680	1904.....	264,124,607
1885.....	173,598,002		
Grand total.....			\$6,657,867,249

Burlington Brass Works BURLINGTON, WIS.

JAMES B. CLOW & SONS, Agents, CHICAGO

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VALVE



SELF-GRINDING
SELF-SEATING
ALWAYS TIGHT

Constant use improves them.
No discs to give out.
No repair kit needed.
Always ready.
It never fails.

We guarantee every valve tested to

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Brokers and Commission Merchants
PACKINGHOUSE PRODUCTS
COTTONSEED PRODUCTS
FERTILIZER MATERIALS

HENRY DUMMERT

218 La Salle Street
CHICAGO

Broker and Commission Merchant
in TALLOW, GREASE and COTTONSEED OIL.
HIGHEST REFERENCES.

The consumption of live stock by Chicago packers and city butchers during 1904, according to the report, was as follows:

	Cattle.	Hogs.	Sheep.
Jan.	181,891	789,893	292,816
Feb.	158,112	746,043	337,843
March	143,634	419,951	270,783
April	138,432	402,397	249,967
May	140,164	475,338	243,135
June	170,926	516,025	301,399
July	80,371	277,213	122,962
Aug.	156,180	409,287	196,727
Sept.	150,727	283,236	227,250
Oct.	230,041	421,498	323,293
Nov.	220,164	648,242	324,977
Dec.	162,211	767,601	251,208
Total, 1904....	1,932,853	6,156,724	3,142,360
Total, 1903....	2,163,031	6,606,909	3,582,651

Referring to the year's business and the effect of the strikes, the report says:

"Owing to the long series of strikes at the packinghouses during the summer of 1904, the receipts of live stock at the Union Stock Yards for the year show a decrease of 173,301 cattle, 4,244 calves, 87,177 hogs and 78,130 sheep, with a general decrease of 16,042 cars in the total receipts, being a loss of about 5 per cent. as compared with 1903 and a gain of 4 per cent. as compared with 1902. That the above decreases were due entirely to the strike is shown by the fact that on the horse market, which was not affected by the strike, there was an increase in receipts of 5,346 horses."

Stock yards' statistics show the average weight of hogs for the past five years, by months, to be as follows:

	1904.	1903.	1902.	1901.	1900.
January. . .	206	208	203	227	229
February . .	205	209	208	222	226
March . . .	206	215	216	222	223
April . . .	208	222	214	226	223
May . . .	214	227	219	227	228
June . . .	221	231	223	231	229
July . . .	226	235	230	229	236
August . . .	239	248	243	238	246
September .	244	257	241	248	247
October . .	230	241	227	236	234
November .	232	228	224	218	240
December . .	219	217	202	238	
Year	227	220	226	233	

A MODEL PACKINGHOUSE MARKET.

Upon the site of their former general office building, corner of Packers' and Exchange avenues, Union Stock Yards, Chicago, Swift & Company have recently erected, at a cost of \$100,000, a modern cold storage building for the use of their packinghouse wholesale market, which is a model of its kind and one of the points of interest to visitors at the Yards.

The building is of the "slow burning" type of construction, special attention having been paid to the rules as laid down by the board of fire underwriters. The exterior is of pressed brick, plain but massive in appearance, rising at one corner into a tower and adorned by a tower clock, the dials of which

are visible from all points of the Stock Yards. Supported from the north walls, extending out over the car-loading platforms and switch tracks, is a steel-trussed and fire-proof roof as a protection to all railway loading and shipments from this part of the plant. On the Packers' avenue side extends the team-loading dock, four hundred feet long, and protected by a handsome steel awning roof extending out over wagons and horses and allowing space for the simultaneous loading of fifty large trucks.

The interior construction and arrangements have been worked out on the most modern lines of practice, and the coolers are claimed to be the most handsomely finished and equipped of any Western packing plant. The insulation details have been given special attention for greatest efficiency and reducing to a minimum the deterioration generally caused by moisture in buildings of this class. The walls and ceilings are finished with a marble-lithic white plaster, which is not only impervious to moisture, but presents a surface which will withstand with little or no defacement the rough usages to which operations subject it.

The cooler building has a floor area of about fifty thousand square feet. The first floor is used as the selling coolers for cattle, sheep and calves and their various cuts, also fresh pork and package goods, including a spacious delicatessen room. The rails have a hanging capacity of fifteen hundred sides of beef and one thousand sheep and calves, and the fresh pork room, the walls of which are lined with white enameled tile, a capacity of fifteen carloads of product.

The second story is devoted to the refriger-

ation of the coolers below, produced by the Gardner patent open brine or sheet system of refrigeration, the same as is used in all of the Swift fresh meat chill rooms. The third floor is utilized for the dry storage or boxed goods, with a capacity of four and one-half million pounds, which are handled from the manufacturing rooms to storage, and thence to the car-loading platforms by means of roller conveyors.

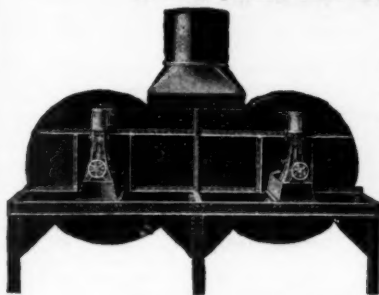
Swift & Company invite the inspection of visitors through this as well as the manufacturing departments of their plant, and have uniformed guards constantly in attendance for the direction and instruction of their visitors.

SEE PAGE 48.

Packinghouse experts looking for employment should watch page 48 for openings.

The "A B C" System of Mechanical Draft

In new plants does away with high stack



Increases the capacity of existing power plants, rendering unnecessary the installation of additional boilers.

Makes possible the use of the cheapest fuel.

Is independent of weather conditions, easily regulated and adaptable to any and all conditions.

May we send you Catalogue No. 118 Z?

American Blower Co.,

DETROIT, MICH.

NEW YORK

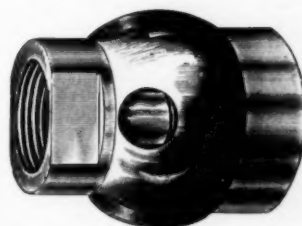
CHICAGO

LONDON

NOISELESS WATER HEATER

— OR —

STEAM MUFFLER



Stops all noise in heating or cooking tanks. Especially suitable for heating blood. No couplings. No loose parts to get out of order. No waste steam. Particulars upon request.

DAVIES WAREHOUSE & SUPPLY CO.,
20 North Clark Street,
Chicago, Ill.

in BY-PRODUCTS for SMALL PACKERS

GET IT OUT WITH THE AID OF THE

\$ EXPERT CHEMISTS

STILLWELL-
PROVISIONER
LABORATORY

\$

CHICAGO PROVISION LETTER.

(Special Letter to The National Provisioner from
C. D. Forsythe & Co.)

Chicago, January 4.—We quote to-day's market as follows: Green hams, 10@12 ave., 8¼; 12@14 ave., 8; 14@16 ave., 7¾; 18@20 ave., 7¾; green picnic, 5@6 ave., 5¾; 6@8 ave., 5½; 8@10 ave., 5½; 10@12 ave., 5¼; green N. Y. shoulders, 10@12 ave., 5½; 12@14 ave., 5½; green skinned hams, 18@20 ave., 9¼; green clear bellies, 8@10 ave., 8¼; 10@12 ave., 8; No. 1 S. P. hams, 8@10 ave., 8¼; 10@12 ave., 8½; 12@14 ave., 8¼; 14@16 ave., 8; 18@20 ave., 7¾; No. 2 S. P. hams, 10@12 ave., 8; 12@14 ave., 7¾; 14@16 ave., 7¾; No. 1 S. P. skinned hams, 16@18 ave., 7¾; 18@20 ave., 8; 20@22 ave., 8; 22@24 ave., 8; 24@26 ave., 8; No. 1 S. P. picnics, 5@6 ave., 5¾; 6@8 ave., 5¾; 7@9 ave., 5; 8@10 ave., 5; 10@12 ave., 5; No. 1 S. P. N. Y. shoulders, 8@10 ave., 6; 10@12 ave., 6; S. P. clear bellies, 8@10 ave., 8¼; 10@12 ave., 8.

CHICAGO PROVISION MARKET

Range of Prices.

SATURDAY, DEC. 31, 1904.

	Open.	High.	Low.	Close.
LARD—(Per 100 lbs.)—				
Jan.	6.72	6.75	6.72	6.75
May	7.00	7.02	7.00	7.00
RIBS—(Boxed 25c. more than loose)—				
Jan.	6.35	6.40	6.35	6.40
May	6.65	6.70	6.65	6.67
PORK—(Per barrel)—				
Jan.	12.35	12.40	12.32	12.40
May	12.75	12.77	12.72	12.77

MONDAY, JAN. 2, 1905.

Holiday. No market.

TUESDAY, JAN. 3, 1905.

LARD—(Per 100 lbs.)—				
Jan.	7.02	7.07	7.02	7.02
May	7.17	7.17	7.12	7.12
RIBS—(Boxed 25c. more than loose)—				
Jan.	6.70	6.75	6.70	6.70
May	6.87	6.87	6.82	6.82
PORK—(Per barrel)—				
Jan.	12.77	12.82	12.77	12.80
May				

WEDNESDAY, JAN. 4, 1905.

LARD—(Per 100 lbs.)—				
Jan.	12.35	12.35	12.20	12.23
May	12.80	12.80	12.60	12.63
RIBS—(Boxed 25c. more than loose)—				
Jan.	6.70	6.75	6.65	6.65
May	7.10	7.10	6.95	6.95
PORK—(Per barrel)—				
Jan.	6.38	6.38	6.33	6.33
May	6.70	6.70	6.63	6.63

THURSDAY, JAN. 5, 1905.

LARD—(Per 100 lbs.)—				
Jan.	6.87½	6.87½	6.80	6.80
May	6.95	6.95	6.90	6.90
RIBS—(Boxed 25c. more than loose)—				
Jan.	6.62½	6.62½	6.57½	6.57½
PORK—(Per barrel)—				
Jan.	12.05	12.05	12.50	12.50
May				

FRIDAY, JAN. 6, 1905.

LARD—(Per 100 lbs.)—				
Jan.	6.55	6.65	6.55	6.65
May	6.90	6.90	6.90	6.90
RIBS—(Boxed 25c. more than loose)—				
Jan.	6.27	6.32	6.27	6.32
May	6.57	6.62	6.55	6.62
PORK—(Per barrel)—				
Jan.	12.12	12.25	12.12	12.25
May	12.50	12.65	12.45	12.65

THE

TRADE

CAN ALWAYS

**GLEAN
BARGAINS**

BY KEEPING AN EYE ON

PAGE 48

CHICAGO LIVE STOCK

RECEIPTS.

	Cattle.	Calves.	Hogs.	Sheep.
Monday, Dec. 26.....	18,743	307	17,490	13,708
Tuesday, Dec. 27.....	3,673	485	8,032	9,127
Wednesday, Dec. 28.....	11,807	257	10,616	6,473
Thursday, Dec. 29.....	11,347	393	8,043	11,747
Friday, Dec. 30.....	9,063	235	16,200	12,022
Saturday, Dec. 31.....	1,074	68	24,433	2,755

Total last week.....	55,737	1,745	84,823	55,832
Total previous week.....	52,211	3,562	201,727	64,416
Cor. week 1903.....	55,748	1,903	191,580	60,303
Cor. week 1902.....	55,271	2,155	202,102	82,373

SHIPMENTS.

	Cattle.	Calves.	Hogs.	Sheep.
Monday, Dec. 26.....	4,595	—	3,190	1,018
Tuesday, Dec. 27.....	1,920	10	2,571	2,391
Wednesday, Dec. 28.....	3,675	4	1,591	—
Thursday, Dec. 29.....	5,236	3	3,000	1,833
Friday, Dec. 30.....	3,372	50	5,066	269
Saturday, Dec. 31.....	373	43	4,496	140

Total last week.....	21,171	110	19,953	5,951
Total previous week.....	21,938	202	24,966	15,018
Cor. week 1903.....	22,285	112	38,077	14,866
Cor. week 1902.....	18,443	627	20,206	8,127
Combined receipts of hogs at eleven markets for week ending Dec. 31, 1904.....			351,000	
Week ago.....			336,000	
Year ago.....			490,000	
Two years ago.....			487,000	
Total receipts for year to date, 22,070,000, against 21,811,000 year ago, 21,990,000 two years ago.				

Receipts at six points (Chicago, Kansas City, Omaha, St. Louis, St. Joseph, Sioux City) as follows:

	Cattle.	Hogs.	Sheep.
Week ending Dec. 31.....	108,500	225,300	85,300
Week ago.....	121,600	432,100	116,000
Year ago.....	116,200	369,000	116,000
Two years ago.....	117,800	371,200	129,000

CHICAGO HOG SLAUGHTER.

Chicago packers slaughtered hogs during week ending December 31 as follows:

Armour & Co.....	13,500
Anglo-American.....	3,600
Continental.....	1,000
Swift & Co.....	12,500
Hammond & Co.....	3,700
Morris & Co.....	6,400
Boyd-Lunham & Co.....	8,200
S & S.....	3,700
H. Boone & Co.....	3,300
Robert & Oake.....	900
Other packers.....	14,000

Total.....	71,400
Left over.....	3,000
Week ago.....	177,000
Year ago.....	142,900
Two years ago.....	
Three years ago.....	

AVERAGE PRICE OF HOGS

Week ending Dec. 31.....	\$4.59
Previous week.....	4.47
Year ago.....	4.09
Two years ago.....	6.40
Three years ago.....	6.00

Estimated receipts of live stock week ending January 7.	
Cattle.....	62,000
Hogs.....	185,000
Sheep.....	90,000

AVERAGE PRICE OF GOOD BEEF CATTLE.

Week ending December 31.....	\$5.10
Previous week.....	4.70
Year ago.....	4.80
Two years ago.....	4.25

CATTLE.

Choice to fancy steers.....	\$6.25@7.00
Fair to fancy export shipping steers.....	5.00@5.75
Medium beef steers.....	3.85@4.40
Inferior and plain steers.....	2.35@3.10
Good to fancy cows and heifers.....	4.15@4.85
Fair to choice feeders.....	3.00@4.20
Fair to good stockers.....	2.25@2.75
Fair to good cows and heifers.....	3.25@3.75
Good cutting and fair cows.....	2.10@3.10
Common to good culling cows.....	1.10@1.85
Bulls, poor to choice.....	1.75@4.00
Calves, common to fair.....	2.75@5.00
Calves, good to fancy.....	5.25@6.50

HOGS

Good to choice heavy shipping.....	\$4.45 @4.60
Good to choice butcher weights.....	4.45 @4.60
Good to fair heavy packing.....	4.35 @4.45
Plain to good heavy mixed.....	4.47½ @4.57½
Assorted light shipping.....	4.25 @4.35
Good to choice 200@275-lbs. weight.....	4.40 @4.55
Fair to choice pigs, 60@125-lbs. weight.....	3.99 @4.20

SHEEP.

Choice to prime wethers.....	\$4.75@5.25
Fair to good mixed.....	3.50@4.75
Fair to fancy ewes.....	3.95@4.65
Fair to fancy grass wethers.....	3.25@5.00
Plain to good breeding ewes.....	3.45@3.75
Colls, bucks and tail-end stock.....	2.00@3.00
Fat range yearlings.....	5.25@6.00
Feeding yearlings, poor to choice.....	3.60@4.90
Fed Western range lambs.....	4.50@6.60
Range feeding lambs.....	5.00@5.75
Native lambs, good to prime.....	5.50@7.00
Native lambs, poor to fair.....	4.00@5.40

CHICAGO RETAIL FRESH MEATS.

NOTE.—It is difficult to quote flat retail figures applicable to the whole of the city, every market having a practically different scale according to location, class and volume of trade, etc.

Beef.

Native Rib Roasts.....	18 @20
Native Sirloin Steaks.....	18 @20
Native Porterhouse Steaks.....	22 @25
Native Pot Roasts.....	8 @10
Rib Roasts from light cattle.....	8 @10
Beef Stew.....	5 @ 8
Boneless Corned Briskets, Native.....	10 @10
Corned Rumps, Native.....	8 @10
Corned Ribs.....	6 @10
Round Steaks.....	5 @12½
Round Roasts.....	10 @12½
Shoulder Steaks.....	10 @12½
Shoulder Roasts.....	10 @12½
Shoulder Neck End, Trimmed.....	7 @12½
Rolls Roast.....	10 @12½

Lamb.

Hind Quarters.....	14
Fore Quarters.....	11½
Legs.....	15
Stew.....	6
Shoulders.....	8
Chops, Rib and Loin.....	20

Mutton.

Legs.....	10
Stew.....	4
Shoulders.....	8
Hind Quarters.....	9
Fore Quarters.....	8
Rib and Loin Chops.....	14

Pork.

Pork Loin.....	10
Pork Chops.....	10
Pork Tenderloins.....	22
Pork Butts.....	9
Spare Ribs.....	8
Blades.....	6
Bocks.....	7
Pigs' Heads.....	5
Leaf Lard.....	9

Veal.

Hind Quarters.....	12½
Fore Quarters.....	10
Legs.....	14
Breasts.....	8@10
Shoulders.....	10
Cutlets.....	20

Butchers' Offal.

Tallow.....	2½ @ 3½
Mixed Bone and Tallow.....	1½ @ 2½
Calfskins, 8 to 15 lbs.....	10½ @12½
Calfskins, under 8 lbs, each.....	55 @60

SOUTH WATER STREET MARKETS.

Live Poultry.

Turkeys.....Old, 13½.....Young, 14	
Chickens.....	@10½
Hens.....	@10
Roosters.....	@ 6½
Springs.....	@11
Ducks.....	10½ @11½
Geese.....	10 @12

Iced Dressed Poultry.

Turkeys, mixed weights.....	@18
Chickens.....	10½ @11½
Springs.....	@11½
Ducks.....	12 @12½
Geese.....	10 @12

Veal.

Choice.....	7½ @ 8
Heavy, 85 to 120 lbs.....	6½ @ 7
Medium, 65 to 80 lbs.....	5½ @ 6
Small, 50 to 60 lbs.....	4½ @ 5
Coarse, small to heavy.....	4 @ 4½

Butter.

Creamery, Prints.....	@28
Creamery, Extras.....	@26
Creamery, Firsts.....	@25
Creamery, Seconds.....	@17
Dairies, Choice.....	@24
Dairies, Firsts.....	@20
Dairies, Ladies.....	@16
Dairies, Packing stock.....	@14

Eggs.

Extras.....	@27
Prime firsts.....	@25
Firsts.....	@23
Fresh, at mark, cases inc.....	@23
Cold Storage.....	@18

MARKET PRICES

CHICAGO.

WHOLESALE FRESH MEATS.

Carcass Beef.	
Western Cows	4 1/2 @ 4 3/4
Native Cows	4 1/2 @ 5 1/4
Western Steers	5 1/2 @ 6 1/4
Good Native Steers	8 1/2 @ 9
Native Steers, Medium	7 @ 8
Heifers, Good	6 1/2 @ 7
Heifers, Medium	5 1/2 @ 6 1/4
Hind Quarters	1 1/2 c. over Straight Beef
Fore Quarters	1 c. under Straight Beef

Beef Cuts.

Steer Chucks	6 @ 6 1/4
Cow Chucks	3 @ 4
Boneless Chucks	3 1/2 @ 3 3/4
Medium Plates	2 @ 3
Steer Plates	3 1/2 @ 4
Cow Rounds	4 1/2 @ 5
Steer Rounds	6 1/2 @ 7
Cow Loins, Common	4 @ 7
Cow Loins, Medium	4 @ 8
Cow Loins, Good	4 @ 10
Steer Loins, Light	14 @ 14
Steer Loins, Heavy	18 @ 18 1/2
Beef Tenderloins, No. 1	17 @ 17
Beef Tenderloins, No. 2	14 @ 14
Strip Loins	6 @ 6
Sirloin Butts	8 @ 8 1/2
Shoulder Clods	8 1/2 @ 9
Rolls	8 1/2 @ 9
Rump Butts	4 1/2 @ 4 1/2
Trimnings	3 @ 3 1/2
Shank	3 @ 3
Cow Ribs, Heavy	9 @ 9
Cow Ribs, Common	5 1/2 @ 5 1/2
Steer Ribs, Light	10 @ 10
Steer Ribs, Heavy	14 @ 15
Loin Ends, steer-native	10 @ 10
Loin Ends, cow	7 @ 7
Hanging Tenderloins	6 @ 6
Flank Steak	5 @ 6

Beef Offal.

Livers	3 @ 3
Hearts	2 1/2 @ 2 1/2
Tongues	12 1/2 @ 12 1/2
Sweetbreads	20 @ 20
Ox Tails, per lb.	4 @ 4
Fresh Tripe—plain	2 1/2 @ 2 1/2
Fresh Tripe, H. O.	4 @ 4
Kidneys, each	4 @ 4
Brains	3 @ 3

Veal.

Heavy Carcass Veal	6 @ 6
Light Carcass	7 1/2 @ 7 1/2
Medium Carcass	7 @ 7
Good Carcass	9 1/2 @ 9 1/2
Medium Saddles	10 @ 10
Good Saddles	11 1/2 @ 11 1/2
Medium Racks	5 1/2 @ 5 1/2
Good Racks	8 @ 8

Veal Offal.

Brains	4 @ 4
Sweetbreads	45 @ 45
Plucks	25 @ 25
Heads, each	10 @ 10

Lambs.

Medium Caul	8 @ 8
Good Caul	8 1/2 @ 8 1/2
Round Dressed Lambs	9 1/2 @ 9 1/2
Saddles Caul	9 1/2 @ 9 1/2
R. D. Lamb Saddles	11 1/2 @ 11 1/2
Caul Lamb Racks	7 @ 7
R. D. Lamb Racks	7 1/2 @ 7 1/2
Lamb Fries, per pair	7 @ 7
Lamb Tongues, each	8 @ 8
Lamb Kidneys, each	1 1/2 @ 1 1/2

Mutton.

Medium Sheep	6 1/2 @ 7
Good Sheep	7 1/2 @ 7 1/2
Medium Saddles	8 @ 8
Good Saddles	9 @ 9
Medium Racks	6 @ 6
Good Racks	6 1/2 @ 6 1/2
Mutton Legs	8 1/2 @ 8 1/2
Mutton Stew	3 1/2 @ 3 1/2
Mutton Loins	8 @ 8
Sheep Tongues, each	3 @ 3
Sheep Heads, each	5 @ 5

Fresh Pork, Etc.

Dressed Hogs	6 @ 6 1/2
Pork Loins	8 1/2 @ 8 1/2
Leaf Lard	7 @ 7
Tenderloins	15 @ 15
Spare Ribs	6 1/2 @ 6 1/2
Butts	5 @ 5
Hocks	5 @ 5
Trimnings	4 1/2 @ 4 1/2
Tails	5 @ 5
Snouts	4 @ 4
Pigs' Feet	3 @ 3
Pigs' Heads	4 @ 4
Blade Bones	5 @ 5
Cheek Meat	5 @ 5
Hog Plucks	3 @ 3
Neck Bones	2 @ 2
Skinless Shoulders	6 1/2 @ 6 1/2
Pork Hearts	2 @ 2
Pork Kidneys	2 @ 2
Pork Tongues	10 @ 10
Ribs Bones	3 1/2 @ 3 1/2
Tail Bones	3 @ 3
Brains	3 @ 3
Backfat	8 @ 8
Hams	9 1/2 @ 11 1/2
Calas	6 1/2 @ 6 1/2
Shoulders	6 1/2 @ 6 1/2
Bellies	8 1/2 @ 8 1/2

SAUSAGE.

Colth Bologna	5 1/2 @ 5 1/2
Bologna, large, long, round and cloth	5 1/2 @ 5 1/2
Choice Bologna	5 1/2 @ 5 1/2
Viennas	8 @ 8
Frankfurters	7 1/2 @ 7 1/2
Blood, Liver, and Headcheese	5 1/2 @ 5 1/2
Tongue	9 @ 9
White Tongue	9 @ 9
Minced Ham	8 1/2 @ 8 1/2
Prepared Ham	9 @ 9
New England Ham	10 @ 10
Compressed Ham	9 @ 9
Large Compressed Ham	9 @ 9
Berliner Ham	7 1/2 @ 7 1/2
Boneless Ham	9 1/2 @ 9 1/2
Oxford Ham	9 1/2 @ 9 1/2
Polish Sausage	6 1/2 @ 6 1/2
Leona, Garlic, Knoblauch	6 1/2 @ 6 1/2
Smoked Pork	6 1/2 @ 6 1/2
Veal Ham	6 1/2 @ 6 1/2
Farm Sausage	12 @ 12
Pork Sausage, bulk or link	7 @ 7
Pork Sausage, short link	7 1/2 @ 7 1/2
Special Prepared Ham	7 1/2 @ 7 1/2
Boneless Pigs' Feet	7 @ 7
Ham Bologna	6 @ 6
Special Compressed Ham	8 @ 8
Boston Roll	6 @ 6
Cubana Sausage	8 @ 8

Summer Sausage.

Supreme Summer, H. C., New Medium Dry	12 @ 12
German Salami, New Dry	14 @ 14
Holsteiner, New	11 @ 11
Mettwurst, New	12 @ 12
Farmer, New	16 @ 16
Darles, H. C., New	16 @ 16
Italian Salami, New	16 @ 16
Monarque Cervelat	10 @ 10

Sausage in Oil.

Smoked Pork, 1-50	3.75 @ 3.75
Smoked Pork, 2-20	3.25 @ 3.25
Bologna, 1-50	2.75 @ 2.75
Bologna, 2-20	2.25 @ 2.25
Viennas, 1-50	4.25 @ 4.25
Viennas, 2-20	3.75 @ 3.75

Sausage in Brine.

Fresh Pork Link	8 @ 8
Liver Sausage	6 1/2 @ 6 1/2
Blood Sausage	6 1/2 @ 6 1/2
Head Cheese	6 1/2 @ 6 1/2
Bologna	6 1/2 @ 6 1/2
Vienna	8 @ 8

VINEGAR PICKLED GOODS.

Pickled Pigs' Feet, in 200-lb. barrels	7.50 @ 7.50
Pickled Plain Tripe, in 200-lb. barrels	4.50 @ 4.50
Pickled H. O. Tripe, in 200-lb. barrels	7.75 @ 7.75
Pickled Ox Lips, in 200-lb. barrels	11.00 @ 11.00
Pickled Pigs' Snouts, in 200-lb. barrels	12.00 @ 12.00
Lamb Tongue, Short Cut, barrels	36.00 @ 36.00

CORNED, BOILED AND ROAST BEEF.

Per doz.	
1 lb., 2 doz. to case	1.30 @ 1.30
2 lb., 1 or 2 doz. to case	2.40 @ 2.40
4 lb., 1 doz. to case	4.85 @ 4.85
6 lb., 1 doz. to case	8.00 @ 8.00
14 lb., 1/2 doz. to case	18.00 @ 18.00

EXTRACT OF BEEF.

Per doz.	
1 oz. jars, 1 dozen in box	2.25 @ 2.25
2 oz. jars, 1 dozen in box	3.55 @ 3.55
4 oz. jars, 1 dozen in box	6.50 @ 6.50
8 oz. jars, 1/2 dozen in box	11.00 @ 11.00
6 oz. jars, 1/2 dozen in box	22.00 @ 22.00
2, 5 and 10 lb. tins	1.75 @ 1.75 per lb.

BARRELED BEEF AND PORK.

Per bbl.	
Extra Plate Beef	10.00 @ 10.00
Plate Beef	9.00 @ 9.00
Extra Mess Beef	8.50 @ 8.50
Prime Mess Beef	9.00 @ 9.00
Beef Hams	10.25 @ 10.25
Rump Butts	9.00 @ 9.00
Mess Pork (repacked)	11.50 @ 11.50
Clear Fat Backs	13.25 @ 13.25
Family Back Pork	14.25 @ 14.25
Bean Pork	10.75 @ 10.75

LARD.

Pure leaf, kettle rendered, per lb., tierces	8 1/2 @ 8 1/2
Lard substitute, tierces	5 1/2 @ 5 1/2
Lard compound	5 1/2 @ 5 1/2
Barrels	1/2 c. over tier.
Half barrels	1/2 c. over tier.
Tubs, from 10 to 80 lbs.	1/2 c. to 1 c. over tier.
Cooking Oil, per gal.	33c @ 33c

BUTTERINE.

F. O. B. CHICAGO.	
No. 1, natural color	10 @ 10
No. 2, natural color	11 1/2 @ 11 1/2
No. 3, natural color	12 @ 12
No. 4, natural color	13 @ 13
No. 5, natural color	14 @ 14
No. 6, natural color	15 @ 15

DRY SALT MEATS.

Clear Bellies, 14@10 average	7 1/2 @ 7 1/2
Rib Bellies, 14@10 average	7 1/2 @ 7 1/2
Fat Backs	6 1/2 @ 6 1/2
Regular Plates	5 1/2 @ 5 1/2
Short Clears	7 @ 7

WHOLESALE SMOKED MEATS.

Hams, 12 lbs. average	10 @ 10
Hams, 14 lbs. average	9 1/2 @ 9 1/2
Hams, 16 lbs. average	9 1/2 @ 9 1/2
Skinless Hams	9 1/2 @ 9 1/2

Calas, 6@7 lbs. average	6 1/2 @ 6 1/2
Calas, 8@12 lbs. average	6 1/2 @ 6 1/2
Breakfast Bacon, fancy	16 1/2 @ 16 1/2
Wide, 8@10 average, and Strip, 4@5 ave.	10 1/2 @ 10 1/2
Wide, 10@12 average, and Strip, 5@6 ave.	10 @ 10
Wide, 12@14 average, and Strip, 6@7 ave.	9 1/2 @ 9 1/2
Dried Beef Sets	12 1/2 @ 12 1/2
Dried Beef Insoles	12 1/2 @ 12 1/2
Dried Beef Knuckles	14 @ 14
Dried Beef Outsides	10 1/2 @ 10 1/2
Regular Boiled Hams	13 1/2 @ 13 1/2
Smoked Boiled Hams	14 @ 14
Boiled Picnic Hams	9 1/2 @ 9 1/2
Cooked Loin Rolls	16 @ 16

SAUSAGE CASINGS.

F. O. B. CHICAGO.	
Rounds, per set	12 @ 12
Middles, per set	40 @ 40
Beef bungs, per piece	5 1/2 @ 5 1/2
Hog casings, as packed	26 @ 26
Hog casings, free of salt	48 @ 48
Hog middles	12 @ 12
Hog bungs, export	12 @ 12
Hog bungs, mediums, each	8 @ 8
Hog bungs, primes	4 @ 4
Hog bungs, narrow	2 @ 2
Imported sheep casings, wide	80 @ 80
Imported sheep casings, medium wide	70 @ 70
Imported sheep casings, narrow	60 @ 60
Beef weasands, No. 1	35 @ 35
Beef bladders, medium	5 1/2 @ 5 1/2
Beef bladders, small, per doz.	16 @ 16
Hog stomachs, each	4 @ 4

FERTILIZERS.

Dried blood, per unit	2.70 @ 2.70
Hoof meal, per unit	2.60 @ 2.60
Concent. tankage, 15% per unit	2.45 @ 2.45
Ground tankage, 12%	2.45 @ 10c
Ground tankage, 11% per unit	2.40 @ 10c
Ground tankage, 10% per unit	2.35 @ 10c
Ground tankage, 9 and 20% ton	2.25 @ 10c
Ground tankage, 8 and 35% ton	18.00 @ 18.00
Ground raw bone, per ton	25.00 @ 25.00
Ground steam bone, per ton	18.00 @ 18.00
Unground tankage, per ton less than ground	50c @ 50c

HORNS, HOOF AND BONES.

Horns, No. 1, 65@70 lbs. average	430.00 @ 430.00
Hoofs, black, per ton	26.00 @ 26.00
Hoofs, striped, per ton	35.00 @ 35.00
Hoofs, white, per ton	50.00 @ 50.00
Flat shin bones, 35@40 lbs. average ton	45.00 @ 45.00
Round shin bones, 35@40 lbs. average ton	45.00 @ 45.00
Round shin bones, 50@52 lbs. average ton	65.00 @ 65.00
Long thigh bones, 90@95 lbs. average ton	95.00 @ 95.00
Jaws, skulls and knuckles, per ton	25.00 @ 25.00

LARDS.

Prime steam, cash	6.80 @ 6.80
Prime steam, loose	6.30 @ 6.30
Neutral	7 1/2 @ 7 1/2
Compound	5 @ 5
Leaf	6 1/2 @ 6 1/2

STEARINES.

Lard	7 1/2 @ 7 1/2
Oleo, prime	6 1/2 @ 6 1/2
Oleo No. 2	6 @ 6
Mutton	6 1/2 @ 6 1/2
Tallow	5 1/2 @ 5 1/2
Grease	4 1/2 @ 4 1/2

OILS.

Lard oil, extra winter strained, tes	58 @ 58
Oleo oil, extra	8 1/2 @ 8 1/2
Oleo oil, No. 2	7 1/2 @ 7 1/2
Oleo, stock	6 1/2 @ 6 1/2
Neatsfoot oil, pure, tierces	60 @ 60
Tallow, prime, tierces	48 @ 48

TALLOW.

Edible	5 1/2 @ 5 1/2
Prime city	5 @ 5
Choice country	4 1/2 @ 4 1/2
Packers' prime	5 @ 5
Packers' No. 1	4 1/2 @ 4 1/2
Packers' No. 2	3 1/2 @ 3 1/2
Renderers' No. 1	4 1/2 @ 4 1/2

GREASES.

White, choice	4 1/2 @ 4 1/2
White, "A"	4 1/2 @ 4 1/2
White, "B"	4 @ 4
Bone	4 @ 4
House	3 1/2 @ 3 1/2
Yellow	3 1/2 @ 3 1/2
Brown	3 @ 3
Glue stock	3 @ 3
Neatsfoot stock	4 @ 4

COTTONSEED OILS.

P. S. Y., loose	21 @ 21
P. S. Y., soap grade	20 1/2 @ 20 1/2
Soap bbls., concn., 65@65% F. A.	1 1/2 @ 1 1/2
Soap stock, bbls., reg., 50% F. A.	90 @ 90

COOPERAGE.

Tierces	1.37 1/2 @ 1.37 1/2
Barrels, Oak	1.17 1/2 @ 1.17 1/2
Barrels, Ash	1.12 1/2 @ 1.12 1/2

CURING MATERIALS.

Refined saltpetre	4 1/2 @ 4 1/2
Soracic acid, crystal to powdered	10 @ 11
Borax	7 1/2 @ 8
Sugar—	
Pure open kettle	4 @ 4
White clarified	4 1/2 @ 4 1/2
Plantation, granulated	5 1/2 @ 5 1/2
Yellow, clarified	4 1/2 @ 4 1/2
Salt—	
Ashton, in bags, 224 lbs.	2.50 @ 2.50
Eng. packing, in bags, 224 lbs.	1.45 @ 1.45
Michigan, medium, car lots, per ton	3.35 @ 3.35
Michigan, granulated, car lots, per ton	2.90 @ 2.90
Casing salt, bbls., 280 lbs., 2X and 3X	1.00 @ 1.00

NEW YORK CITY

LIVE CATTLE.

Good to choice native steers.....	\$5.10@5.80
Medium to fair native steers.....	4.15@5.00
Poor to ordinary native steers.....	3.25@4.05
Oxen and stags.....	2.75@4.50
Bulls and dry cows.....	1.60@4.00
Good to choice native steers one year ago.....	4.85@5.55

LIVE CALVES.

Live real calves, prime, per 100 lbs.....	\$9.00@9.50
Live real calves, fair to good, per 100 lbs.....	7.50@8.50
Live real calves, com. to med., 100 lbs.....	5.00@7.00
Live calves, small, per 100 lbs.....	4.00@4.50
Live calves, fed, per 100 lbs.....	4.00@—
Live calves, yearlings, per 100 lbs.....	3.00@3.50
Live calves, yearlings, per 100 lbs.....	—@—
Live calves, western, per 100 lbs.....	2.50@5.00

LIVE SHEEP AND LAMBS.

Lambs, bothouse, per head.....	\$5.00@9.00
Live lambs, prime, per 100 lbs.....	7.85@8.20
Live lambs, common to good.....	6.75@7.75
Live sheep, prime, per 100 lbs.....	5.00@5.35
Live sheep, common to good, 100 lbs.....	3.50@4.75

LIVE HOGS.

Hogs, heavy weights (per 100 lbs.).....	@5.20
Hogs, medium.....	@5.40
Hogs, light to medium.....	@5.40
Pigs.....	@5.50
Roughs.....	@4.20 @4.50

DRESSED BEEF.

CITY DRESSED.

Choice native, heavy.....	@ 9 1/4
Choice native, light.....	@ 9 1/4
Common to fair, native.....	@ 6 1/2 @ 7 1/2

WESTERN DRESSED BEEF.

Choice native, heavy.....	@ 9
Choice native, light.....	@ 8 1/2
Native, com. to fair.....	@ 7 1/2
Choice Western, heavy.....	@ 7 1/4
Choice Western, light.....	@ 6 1/2
Common to fair, Texan.....	@ 6 1/2
Good to choice heifers.....	@ 6 1/2 @ 7
Common to fair heifers.....	@ 6
Choice cows.....	@ 5 1/2 @ 6
Common to fair cows.....	@ 4 1/2 @ 5 1/2
Good to choice oxen and stags.....	@ 6 1/2
Common to fair oxen and stags.....	@ 6 1/4
Fleshy bologna bulls.....	@ 4 1/2
Fresh pork loins, Western.....	@ 10 @ 11

DRESSED CALVES.

Veals, city dressed, prime, per lb.....	@ 14 1/2
Veals, good to choice, per lb.....	@ 14
Calves, country dressed, prime, per lb.....	@ 13
Calves, country dressed, fair to good.....	@ 11 1/2 @ 12
Calves, country dressed, common.....	@ 10 @ 11

DRESSED HOGS.

Pigs.....	@ 7 1/2
Hogs, heavy.....	@ 6 1/2
Hogs, 180 lb.....	@ 6 1/2
Hogs, 160 lb.....	@ 6 @ 6 1/2
Hogs, 140 lb.....	@ 6 @ 6 1/2

DRESSED SHEEP AND LAMBS.

Spring lambs, choice.....per lb.....	@ 12 1/2
Spring lambs, good.....	@ 11
Spring lambs, culls.....	@ 10
Sheep, choice.....	@ 7 1/2 @ 8
Sheep, medium to good.....	@ 7 @ 7 1/2
Sheep, culls.....	@ 6 @ 7

PROVISIONS.

(Jobbing Trade.)

Smoked hams, 10 lb. average.....	@ 11
Smoked hams, 12 to 14 lbs. average.....	@ 10 1/2
Smoked hams, heavy.....	@ 10 1/2
California hams, smoked, light.....	@ 7 1/2
California hams, smoked, heavy.....	@ 7 1/2
Smoked shoulders.....	@ 8
Smoked bacon, boneless.....	@ 11 1/2
Smoked bacon (rib in).....	@ 11 1/2
Dried beef sets.....	@ 14
Smoked beef tongues, per lb.....	@ 18
Pickled bellies, heavy.....	@ 8 1/2 @

BONES, HOOFS AND HORNS.

Round shin bones, av. 50@60 lbs. cut, per 100 bones, per 2,000 lbs.....	\$55.00@80.00
Flat shin bones, av. 40@45 lbs. cut, per 100 bones, per 2,000 lbs.....	42.00@ 45.00
Thigh bones, av. 90@95 lbs. cut, per 100 bones, per 2,000 lbs.....	75.00
Horns, per ton.....	15.00@ 25.00
Horns, 7 1/2 oz. and over, steers, first quality, per ton.....	@ 3.00

BUTCHERS' SUNDRIES.

Fresh steer tongues.....	70@80c. a piece
Fresh cow tongues.....	30@45c. a piece
Calves' head, scalded.....	30@40c. a piece
Sweet breads, veal.....	25@75c. a pair
Sweet breads, beef.....	18@25c. a pound
Calves' liver.....	25@50c. a piece
Beef kidneys.....	7@12c. a piece
Mutton kidneys.....	1 1/2 @ 3c. a piece
Livers, beef.....	4@ 5c. a pound
Oxtails.....	5@ 7c. a piece
Hearts, beef.....	8@12c. a piece
Holls, beef.....	10@12c. a pound
Tenderloin beef, Western.....	15@25c. a pound
Lambs' fries.....	6@10c. a pair
Fresh pork loins, city.....	11@11 1/2
Fresh pork loins, Western.....	10@11

BUTCHERS' FAT.

Ordinary shop fat.....	2 1/4 @ 3
Suet, fresh and heavy.....	4 @ 5
Shop bones, per cwt.....	@ 25

SAUSAGE CASINGS.

Sheep, imp., wide, per bundle.....	50
Sheep, imp., wide, per keg, 50 bundles.....	\$40.00
Sheep, imp., medium, per bundle.....	60
Sheep, imp., per bundle, narrow.....	44
Sheep, imp., Russian Rings.....	—
Hog, American, in tcs. or bbls., per lb., f. o. s.....	48
Hog, American, kegs, per lb. f. o. s.....	45
Beef, rounds, per set, f. o. b. Chicago.....	12
Beef, rounds, per set, f. o. b. New York.....	13
Beer, rounds, per lb.....	3
Beef, hungs, piece, f. o. b. New York.....	6 1/2
Beef, hungs, per lb.....	5
Beef, middles, per set, f. o. b. Chicago.....	40
Beef, middles, per set, f. o. b. New York.....	42
Beef, middles, per lb.....	@ 6 1/2
Beef weasands, per 1,000 No. 1's.....	@ 5 1/2
Beef weasands, per 1,000, No. 2's.....	2 1/2 @ 3

SPICES.

	Whole.	Ground.
Pepper, Sing., white.....	19	20
Pepper, Sing., black.....	14	15
Pepper, Penang, white.....	18	19
Pepper, red, Zanzibar.....	15	18 1/2
Pepper, shot.....	14	—
Allspice.....	7	8 1/2
Coriander.....	9	10
Cloves.....	16	10
Mace.....	48	53

SALTPETRE.

Crude.....	4 @ 4 1/4
Refined—Granulated.....	4 1/4 @ 4 1/4
Crystals.....	4 1/2 @ 5 1/4
Powdered.....	4 @ 5

GREEN CALFSKINS.

No. 1 skins.....	\$ 20
No. 2 skins.....	18
No. 1 B. M. skins.....	18
No. 2 B. M. skins.....	16
No. 1, 12 1/2-14.....	2.00
No. 2, 12 1/2-14.....	1.75
No. 1 B. M., 12 1/2-14.....	1.80
No. 2 B. M., 12 1/2-14.....	1.60
No. 1 kips, 14-18.....	2.25
No. 2 kips, 14-18.....	2.00
No. 1 B. M. kips.....	2.00
No. 2 B. M. kips.....	1.75
No. 1 heavy kips, 15 and over.....	2.60
No. 2 heavy kips, 15 and over.....	2.35
Branded skins.....	12
Branded kips.....	1.50
Heavy branded kips.....	1.75
Ticky skins.....	12
Ticky kips.....	1.60
Heavy ticky kips.....	1.80
No. 3 skins.....	12

DRESSED POULTRY.

DRY-PACKED.

Spring Turkeys—Ohio & Michigan, scalded fancy.....	@ 18
Western, young toms, fancy.....	@ 18
Western, young hens, fancy.....	@ 18
Western, mixed weights, fancy.....	@ 18
Western, mixed, good working lines.....	@ 17
Western, poor to fair.....	@ 16
Turkeys—Old hens and toms.....	@ 16
Capons—Philadelphia, large, fancy.....	@ 24
Philadelphia, mixed weights.....	@ 20

Philadelphia, small and slips.....	@ 16
Ohio & Michigan, large fancy.....	@ 18
Ohio & Michl., mixed weights, choice.....	@ 18
Other Western, large.....	@ 16
Western, small and slips.....	@ 12
Chickens—Phila., 8@9 lbs. to pair, per lb.....	@ 13
Philadelphia, mixed sizes, per lb.....	@ 16
Pa., 7@8 lbs. to pair, fancy, per lb.....	@ 15
Pennsylvania, mixed sizes.....	@ 14
Western, dry-picked, broilers, fancy.....	@ 15
Western, dry-picked, large, roasters.....	@ 12 1/2
Western, dry-picked, average run, lb.....	@ 11 1/2
Ohio & Michigan, scalded, fancy.....	@ 12
Ohio & Michigan, scalded, average run.....	@ 11 1/2
Other Western, scalded, 8 lbs. and over to pair, fancy.....	@ 12 1/2 @ 13
Other Western, average run.....	@ 11 1/2 @ 12
Western, scalded, inferior, per lb.....	9 @ 10
Fowls—Western, dry-picked, fancy, heavy.....	@ 11 1/2
Western, dry-picked, average run.....	@ 11
Ohio & Michigan, scalded, per lb.....	@ 11 1/2
Other Western, scalded, fancy heavy.....	@ 11 1/2
Other Western, scalded, average run.....	@ 11
Western and Southern fowls and chickens, poor to fair.....	8 @ 10
Old cocks, per lb.....	8 1/2 @ 9
Spring Ducks—Ohio & Michigan, choice.....	@ 13 @ 14
Western, choice.....	@ 12 1/2 @ 13
Western, fair to good.....	@ 10 @ 12
Western, poor.....	5 @ 8
Spring Geese—Western, choice.....	@ 12
Western, fair to good.....	9 @ 11
Western, poor.....	5 @ 8
Squabs—Prime, large, white, per dozen.....	@ 3.00
Mixed, per dozen.....	2.50@2.65
Dark, per dozen.....	1.75@2.00

LIVE POULTRY.

Chickens, nearby and Western, per lb.....	@ 10
Fowls—Per lb.....	@ 12
Roosters—Old, per lb.....	@ 8
Turkeys—Old, per lb.....	@ 12
Ducks—Western, average, per pair.....	70 @ 80
Southern, average per pair.....	60 @ 65
Geese—Western, average, per pair.....	1.37@1.62
Southern, average, per pair.....	1.25@1.37
Live Pigeons—Per pair.....	@ 20

GAME.

Wild ducks, Canvasback, per pair.....	\$1.00@2.50
Wild ducks, Red-head, per pair.....	1.00@1.50
Wild ducks, Mallard, per pair.....	75@1.00
Wild ducks, Ruddy, per pair.....	65@ 75
Wild ducks, Teal, blue-wing, per pair.....	40@ 60
Wild ducks, Teal, greenwing, per pair.....	35@ 50
Wild ducks, common, per pair.....	25@ 40
Rabbits, Cotton tail, per pair.....	10@12 1/2
Rabbits, Jack, per pair.....	30@ 40

FERTILIZER MARKETS.

BASIS, NEW YORK DELIVERY.

Bone meal, steamed, per ton.....	\$22.00 @ 23.00
Bone meal, raw, per ton.....	25.00 @ 25.50
Nitrate of soda—future.....	@ 2.35
Nitrate of soda—spot.....	@ 2.35
Bone black, spot, per ton.....	13.50@ch
Dried blood, N. Y., 12@13 per cent. ammonia.....	2.55 @ 2.60
Dried blood, West, high grade, fine ground, c. f. N. Y.....	2.90 @ 2.95
Tankage, 9 and 20 p. c., f. o. b. Chicago.....	21.00 @ 22.00
Tankage, 8 and 20 p. c., f. o. b. Chicago.....	18.00 @ 19.00
Tankage, 7 and 30 p. c., f. o. b. Chicago.....	15.00 @ 16.00
Tankage, 6 and 35 p. c., f. o. b. Chicago.....	15.00 @ 16.00
Garbage tankage, f. o. b. New York.....	8.00 @ 9.00
Fish scrap, dried, 11 p. c. ammonia and 15 p. c. bone phosphate.....	30.00 @ 31.00
Wet, acidulated, 6 p. c. ammonia, per ton.....	14.00 @ 15.00
Azotine, per unit, del. New York.....	2.60 @ 2.65
Sulphate ammonia gas, for shipment, per 100 lbs.....	3.20 @ 3.25
Sulphate ammonia gas, per 100 lbs. spot.....	3.20 @ 3.25
Sulphate ammonia bone, per 100 lbs.....	3.05 @ 3.10
So. Carolina phosphate rock, ground, per 2,000 lbs., f. o. b. Charleston.....	6.50 @ 7.75
So. Carolina phosphate rock, undried, f. o. b. Ashley River, per 2,400 lbs.....	3.50 @ 3.75
The same, dried.....	3.75 @ 4.00
POTASHES, ACCORDING TO QUANTITY.	
Kalnit, shipment, per 2,240 lbs.....	\$8.95 @ 9.50
Kalnit, ex-store, in bulk.....	9.60 @ 10.05
Kieserit, future shipment.....	7.00 @ 7.25
Muriate potash, 80 p. c., ex-store.....	1.88 @ 1.95
Muriate potash, 80 p. c., future shipment.....	1.80 @ 1.90
Double manure salt (40@40 p. c., less than 2 1/2 p. c. chloride), to arrive per lb. (basis 48 p. c.).....	1.09 @ 1.20
Sulphate potash, to arrive (basis 90 p. c.).....	2.08 @ 2.12
Sylvinit, 24 to 36 p. c., per unit, S.P.....	89 @ 40

LIVE STOCK REVIEWS

CHICAGO

(Special Letter to The National Provisioner from the Bowles Live Stock Commission Company.)

Chicago, Jan. 4, 1905.

CATTLE.—Following the light receipts and advance in the cattle market the middle of last week prices last Friday were 25c. lower and on Monday of this week, with receipts 33,557, a still further decline of 10@25c. was noted. Trains arrived late, the market was badly congested with the heavy run at a time when it was not needed. The general market was unsatisfactory to salesmen and shippers. Tuesday's receipts were 5,024, and under the light run the market strengthened, but buyers had loaded up strongly on Monday, and were not in urgent need of cattle. To-day's receipts were estimated at 12,000, and prices were 10@25c. higher. It is impossible to impress upon the country shipper the advantage that would result to him and others if the receipts could be more evenly distributed throughout at least five days in the week instead of having an oversupply one day and practically nothing the next, and as long as this condition continues violent fluctuations must result, with the shippers getting the benefit of the advances on small receipts and the declines on the larger number. The buyers were in the saddle early this morning looking for good cattle, but this kind was scarce, and a number of orders for good cattle remained unfilled. Best steers sold at \$6, 13 averaging 1,338 lbs. Only a comparatively few sales were recorded over \$5.50, and the bulk of the medium and export and shipping steers sold at \$4.35 @4.75, with good export cattle at \$4.85@5.10. Plain 1,050 and 1,300 lbs. killing steers sold from \$3.90@4.40. Common lots of 350 lbs. and inferior little killers sold down to \$2.85. It is hard to comprehend why the country shipper will persist in sending cattle to market after a sixty-day feed in a half-fat or warmed up condition, and sell them at a price but little better than feeders when they can be matured to good advantage and sold at a profit. Native butcher stock advanced from 10@15c. except on canners. Stockers and feeders ruled steady. Present indications point to a light run and higher market the balance of the week.

HOGS.—Receipts of hogs for the first three days of this week show an increase of about 50,000, as compared with the same time last week. Monday's official receipts were 49,746, which was more than the trade expected, and caused a break in prices of 5@10c. per cwt., tops selling at \$4.75, with the bulk of the sales at \$4.50@4.65. Tuesday's receipts were fairly liberal, being about 35,000. The market was fairly active with the best heavy grades strong, while the light grades were weak at barely steady prices. To-day's (Wednesday) receipts estimated at 35,000; the market opened strong with some sales a trifle higher. Shipping orders, however, proved to be light, and after they were filled local packers refused to follow the open prices, and bought their hogs about 5c. lower than the opening. Trains were late and a good many hogs arrived too late for the market, and it is estimated that 12,000 to 14,000 hogs will be carried over to-night unsold. Provision market broke badly to-day, and, taking this in connection with the heavy holdovers, the prospects are for a lower market for the next day or two at least. We quote to-day's sales as follows: Good to best medium heavyweight butchers and shippers, \$4.70@4.77½; good to best heavy packers, \$4.65@4.75; mixed grades, \$4.50@4.65; selected light bacon, \$4.35@4.50; pigs, \$3.75 @4.25.

SHEEP.—Receipts of sheep have been quite light the past two days, and the market on lambs the highest of the season, choice selling at \$7.50 to-day. Sheep, however, have not shown any advance, and rule about steady. Choice fed yearlings are in good de-

mand at from \$6.25@6.50; exporters have been quite active and quite a large string of fed Western wethers sold for export account at \$5.40@5.60, a few prime native wethers up to \$5.75, good to choice Western ewes at \$4.65@5, with natives at \$4.50@5.15, a few choice yearlings at \$5.25. Good to choice native lambs sold at from \$6.75@7.25, while Westerns were in about the same notch. A strong demand prevails for feeders and the extreme top of the season was reached yesterday when a Michigan buyer paid \$6.30, wethers going at \$4.50@4.75, and yearlings worth \$5.25. Outlook for the balance of the week moderate receipts and active market.

KANSAS CITY

(Special Wire to The National Provisioner.)

Kansas City, Mo., Jan. 6, 1905.

CATTLE.—Receipts this week, 21,500; last week, 20,100; same week last year, 39,800. The big run at Chicago Monday and lower prices caused thereby checked receipts of cattle, and there has been a recovery on beef steers each day since. Local demand is good and prices a trifle higher than a week ago; top this week, \$5.30, with a respectable number of sales above \$5; bulk of sales, \$4@4.75. Cows lost more than steers Monday, and have gained less since, and are 10@15c. lower than last Friday; heifers, \$3.75@4.50; heavy cows, \$3.50@4 for good ones; stockers and feeders, 15c. higher, at \$3.25@4.15. Some good quarantine steers have been received at \$4@4.40. Veals firm, \$5.50@6.50.

HOGS.—Receipts this week, 46,800; last week, 21,600; same week last year, 46,600. Quality of hogs is better than last week. Prices are 5@10c. lower than a week ago, and 10@20c. under a year ago. Packers still contend for lower prices, but are unable to force values in the country below the magic \$4. Top here to-day, \$4.62; mixed packing hogs, \$4.40@4.55; lights, \$4.20@4.40; pigs, \$3.75@4.

SHEEP.—Receipts this week, 14,300; last week, 9,200; same week last year, 20,500. Strong markets continue to rule in the sheep market; prices are 10@15c. above a week ago. Best native lambs sold at \$7 yesterday; fed Western lambs, \$6.90; all good lambs sell at \$6.40 or better; Western yearlings stand at \$6.15 for tops; wethers, \$5.25@5.50; ewes, \$4.50@5; choice bucks, \$4. No feeding sheep here this week.

HIDES are lower; green salted, 8½c.; side brands, over 40 lbs., 8½c.; uncured, 1c. less; glue, 4½c.; horse hides, \$3.25; medium, \$3.

Packers' purchases this week:

	Cattle.	Hogs.	Sheep.
Armour	3,750	11,528	4,278
Cudahy	2,991	11,136	1,158
Fowler	1,085	530	....
Ruddy	492	....	....
Schwarzachild	3,607	7,230	3,386
Swift	2,430	8,180	4,206

OMAHA

(Special Letter to The National Provisioner.)

South Omaha, January 3, 1905.

Receipts of cattle were naturally very light the last week of the year and the market advanced very materially on all grades of stock. Both beef steers and cows and heifers ruled 15@25c. higher at the close of the week and the tone to the market appeared to be healthy and strong. This week, however, the market and feeding cattle has suffered from lack of started out badly. Although local supplies were only moderate on Monday the demand from packers was indifferent and there was a sharp decline in values all along the line. It looks as if the decline was only temporary and to-day all classes of buyers took hold freely at higher figures. It takes choice finished beefs to bring \$5 or better and the bulk of the fair to good scale are selling around \$4.25@4.75. Cow stuff seems to

meet with a very fair request right along as supplies of butchers' stock and canners' have been rather limited. Good fat stock sells readily at \$2.80@3.40, with fair grades at \$2.40@2.80 and canners' and cutters' at \$1.75@2.35. Business in stockers and feeders has been comparatively light for some time and the output from this market during 1904 was 20 per cent. smaller than in 1903 and 30 per cent. smaller than in 1902. Prices have held fairly steady and feeder buyers are paying more than packers for the short fed and warmed up stuff. Good to choice feeding steers bring \$3.60@4, with the fair to good kinds at \$3.29@3.50 and the common to fair grades and odds and ends around \$2.50@3.

Hog prices scored a very fair advance lately on account of limited receipts. The demand is good from all classes of buyers and it is apparent that the packers are anxious for the hogs at prevailing prices. On account of their scarcity, the light and butcher grades are still the best sellers, but weight is not so much of a consideration with buyers as quality, and the range of prices is very narrow. To-day with about 7,000 hogs here the market was a shade higher on all grades. Tops brought \$4.50 and the bulk of the trading was around \$4.40@4.45.

Sheep receipts have been too small to cut very much of a figure and the demand for them has been so great that prices have gone skyward at a great rate. On both muttons and lambs, the advance has been 25@30c., and packers have been unable to get nearly enough to supply their wants. At the same time there has been the usual vigorous inquiry from feeder buyers and prices have been firmly held for all desirable offerings.

ST. JOSEPH

(Special Letter to The National Provisioner.)

South St. Joseph, Mo., Jan. 3, 1905.

There has been very little doing in the cattle line this week, as receipts have only been nominal in numbers, and the good to choice qualified steers have been exceptionally scarce. The trade in steers is practically where it was a week ago, the advance of last Thursday and Friday having been lost during the past two days. The demand has been very lax for the common to fair grades of half-fat stuff, which have formed the burden of supplies, but the demand for the few really good corn-fed steers offered has been exceptionally strong. Cows and heifers have advanced 10@15c., as have bulls and stags, while veals show a gain of 25c. Strictly good to choice corn-fed heifers are quotable at \$4.25@4.50, with the pretty fair qualities selling largely around \$3.75@4. Fancy cows would sell up to \$4, but the great bulk of offerings have been selling around \$3.25@3.50, with common to fair at \$3 and under. Bulls and stags are quoted at \$2.65@3.75 and veals at \$3@6.25. The trade in stock supplies, and the few offered have sold readily at a 10@15c. advance over last week. Good to choice heavy feeders are quotable at \$3.50@4, while a very good kind have been selling at \$3.25@3.40. Yearlings and calves range from \$2.40@3.50, with the bulk selling at \$2.75@3.25.

The hog market to-day showed a nominal advance, but the tendency before has been downward, regardless of the light supplies. The market to-day ranged from \$4.30@4.60, with the bulk selling at \$4.40@4.55. There is nothing in the general situation to warrant the country in anticipating any permanent advance, as quality continues to run very good, which indicates that there are yet many hogs in the country ready to come on the least rally in values.

The run of sheep and lambs has materially increased, and South St. Joseph, as in years past, is taking the lead on high prices. Both native and western lambs have sold up to \$7 this week, good wethers at \$5.75 and ewes at \$4.50@4.60. Packers appreciated the liberal supplies by purchasing freely and everything indicates a very prosperous season for the sheep and lamb trade.

SLAUGHTER REPORTS

Special reports to The National Provisioner show the number of livestock slaughtered at the following centers for the week ending December 31, 1904:

Cattle.

Chicago	34,568
Omaha	8,243
Kansas City	14,300
St. Joseph	4,991
Cudahy	324
Sioux City	3,125
South St. Paul	725
Louisville	1,080
New York and Jersey City	1,889
Fort Worth	38,817
Detroit	812
Buffalo	10,770

Hogs.

Chicago	64,870
Omaha	28,292
Kansas City	30,302
St. Joseph	21,598
Cudahy	10,541
Sioux City	15,844
Ottumwa	8,588
Cleveland	16,500
Cedar Rapids	5,595
Bloomington	1,438
South St. Paul	10,447
Indianapolis	13,363
Louisville	6,960
New York and Jersey City	46,227
Fort Worth	4,901
Detroit	3,084
Buffalo	39,100

Sheep.

Chicago	50,181
Omaha	6,707
Kansas City	7,651
St. Joseph	6,478
Cudahy	154
Sioux City	22
South St. Paul	611
New York and Jersey City	18,090
Fort Worth	1,826
Detroit	1,580
Buffalo	41,000

NEW YORK LIVESTOCK

WEEKLY RECEIPTS JANUARY 2, 1905.

	Bees.	Cows.	Calves.	Sheep.	Hogs.
Jersey City	2,126	—	233	12,318	11,582
Sixtieth street	952	20	1,600	5,794	—
Fortieth street	—	—	—	—	21,045
Lehigh Valley	5,673	—	—	—	—
Weehawken	800	—	—	1,420	—
Scattering	—	40	74	33	3,900
Totals	9,613	60	1,927	19,565	46,227
Totals last week	11,404	131	2,060	29,072	50,092

WEEKLY EXPORTS

	Live cattle.	Live sheep.	Qrs. of beef.
Schw'ld & S'berger, So. Victorian	418	—	—
Schw'ld & S'berger, So. Baltic	—	—	1,000
Schw'ld & S'berger, So. Minnetonka	420	—	1,500
Schw'ld & S'berger, So. St. Louis	—	—	1,300
J. Shamburg & Son, So. Victorian	420	1,420	—
J. Shamburg & Son, So. Minnetonka	420	—	—
J. Shamburg & Son, So. Maranhesse	30	—	—
Morris Beef Co., So. Victorian	—	—	1,200
Morris Beef Co., So. St. Louis	—	—	1,400
Morris Beef Co., So. Baltic	—	—	2,400
Armour & Co., So. Victorian	—	—	1,400
Armour & Co., So. St. Louis	—	—	1,000
Swift Beef Co., So. Baltic	—	—	1,100
Cudahy Packing Co., So. Campana	—	—	1,300
Miscellaneous, So. Trinidad	76	50	—
Total exports	1,784	1,475	13,600
Total exports last week	2,074	1,745	13,000
Boston exports this week	1,850	—	7,000
Baltimore exports this week	2,043	1,625	—
Philadelphia exports this week	1,486	—	1,300
Newport News exports this week	556	—	—
To London	2,821	—	8,200
To Liverpool	3,714	3,045	13,700
To Glasgow	878	—	—
To Para	30	—	—
To Bermuda and West Indies	76	50	—
Totals to all ports	7,519	3,095	21,900
Totals to all ports last week	7,231	5,077	20,100

FRIEND GOES TO DOLD.

H. D. Friend, manager of the Bradford, Pa., branch of the G. H. Hammond Company, has resigned to accept a position with the Jacob Dold Packing Company, of Buffalo. Mr. Friend has been with the Hammond Company a number of years, representing them at Syracuse and Troy, N. Y., before taking charge at Bradford, where he has been located for the past two and a half years. His successor has not been announced.

GENERAL MARKETS

LARD IN NEW YORK.

Western steam, \$6.90; city steam, \$6.37½; refined, Continent, tcs., \$7.10; do., South America, tcs., \$7.75; do., kegs, \$8.75; compound, \$4.62½@4.87½.

HOG MARKETS, JANUARY 6.

CHICAGO.—Receipts, 30,000; slow; weak; \$4.15@4.70.

KANSAS CITY.—Receipts, 7,000; slow; \$4.30@4.60.

OMAHA.—Receipts, 4,300; slow; steady; \$4.40@4.55.

ST. LOUIS.—Easy; \$3.75@4.75.

INDIANAPOLIS.—Receipts, 12,000.

CLEVELAND.—Receipts, 70 cars; active; \$4.70@4.75.

EAST BUFFALO.—Receipts, 5,100; 5c. lower; \$4.75@5.

LIVERPOOL.

Liverpool, Jan. 6.—(By cable)—Beef extra India mess, 68s. 9d.; pork, prime mess, Western, 70s.; shoulders, 33s.; hams, s. c., 39s. 6d.; bacon, c. c., 34s.; long clear, light, 37s.; do., heavy, 35s.; short ribs, 36s. 6d.; backs, 34s. 6d.; bellies, 42s.; turpentine, 38s. 6d.; rosin, common, 7s. 3d.; prime Western lard, tcs., 35s. 3d.; do., 28-lb. pails, 34s. 3d.; cheese, white, old, —; new, 53s. Cheese, colored, old, —; new, 53s.; American steam lard (Hamburg 50 kilos), 33½ marks; tallow, 22s. 9d.; tallow Australian (London), 26s. 6d.; cottonseed oil (Hull), 14s. 3d.; linseed oil (London), 14s. 10½d.; Calcutta linseed (London), spot, 32s.; petroleum, refined (London), 5½d.

OLEO AND NEUTRAL LARD.

So far in the new year oleo business has been light on account of the holiday feeling in the European markets, but the supplies of oleo both in Europe and here are light. There has been hardly any change in price and not much business done.

Neutral lard is constantly tending downward in sympathy with the lower lard market resulting from increase in the stocks, and as for cottonseed oil, that has declined again and is now very nearly at the lowest point that it has ever been known to be.

RECEIPTS AT CENTERS

SATURDAY, DEC. 31, 1904.

	Cattle.	Hogs.	Sheep.
Chicago	1,500	23,000	3,000
Kansas City	200	3,000	500
Omaha	50	10,200	1,000

MONDAY, JAN. 2, 1905.

Chicago	37,000	47,000	25,000
Kansas City	5,000	5,000	2,000
Omaha	1,800	6,200	1,250

TUESDAY, JAN. 3, 1905.

Chicago	3,500	35,000	15,000
Kansas City	7,000	9,000	3,000
Omaha	2,700	6,000	3,000

WEDNESDAY, JAN. 4, 1905.

Chicago	12,000	35,000	18,000
Kansas City	5,000	10,000	3,000
Omaha	2,000	7,000	5,800

THURSDAY, JAN. 5, 1905.

Chicago	7,000	30,000	15,000
Kansas City	3,000	9,000	2,000
Omaha	1,200	4,500	4,000

FRIDAY, JAN. 6, 1905.

Chicago	3,000	3,000	6,000
Kansas City	2,000	8,000	1,000
Omaha	1,000	4,200	2,700

FRIDAY'S CLOSINGS.

Provisions.

Hog receipts at the packing centres were moderate for the day, and their prices fairly steady. The products markets opened steady and subsequently ruled somewhat higher. The entire list was helped to a moderate advance through the understanding that a prominent operator was buying lard.

Cottonseed Oil.

The New York market was stronger and for late deliveries ¼@½c. higher, as there was some disposition to buy on speculation the late deliveries. Sales of 500 bbls. prime yellow, January, at 22c.; 500 bbls. do., May, at 23c.; 200 bbls. do., at 23½c. Prices in New York: January, 21¼@22c.; February, 22@22½c.; March, 22¼@22½c.; May, 23¼@23½c.; July, 24@24½c.; September, 25¼@25½c.

Tallow.

Market is not changed for the day from the features in our review.

Oleo Stearine.

Quiet at 6½c. in New York and Chicago.

BALTIMORE FERTILIZER MARKET.

(Special Letter to The National Provisioner from Thos. H. White & Co.)

Baltimore, Md., Jan. 3, 1905.—Ammoniates during December were dull. Eastern consumers as a rule seem fairly well supplied, and for what they may need later are taking their chances of obtaining at prices nearer to their idea of value; while Southern buyers have held aloof at anything except substantial concessions from producers' nominal asking prices. A fair volume of business in some materials is reported, and sellers generally are claiming short stocks, and while this may be correct as to blood, it is hard to reconcile as to the other grades, in view of conditions prevailing since November 1.

At the close we note a shading of prices throughout the list, and a disposition on the part of sellers to consider counter offers against these quotations. We quote:

Unground tankage, 9 and 20, \$2.15 and 10, per unit f. o. b. Chicago; ground tankage, 11 and 15, \$2.32½ and 10, per unit f. o. b. Chicago; ground concentrated tankage, \$2.37½@2.40 per unit f. o. b. Chicago; ground blood, \$2.67½@2.70 per unit f. o. b. Chicago; hoof meal, \$2.50@2.52½ per unit f. o. b. Chicago; crushed tankage, 9 and 20 (futures), \$2.60 and 10, c. a. f. basis Baltimore.

Nitrate of Soda.—Spot, \$2.35 per 100 lbs.; January, February, March, April, \$2.35 per 100 lbs.; May, June, \$2.32½ per 100 lbs.; July, December, \$2.30 per 100 lbs. All above for 95 per cent. grade; 96 per cent. grade 2½c. per 100 lbs. higher.

Sulphate of Ammonia.—Cables this week quote: January, April, inclusive, \$3.20@3.22½ c. i. f. Baltimore, Philadelphia and New York.

WESTERN FERTILIZER MARKET.

(Special Letter to The National Provisioner.)

Chicago, Jan. 4.—Prices are unchanged, and the market rather quiet and waiting. Lower prices of cotton are evidently affecting the disposition of Southern buyers. The outlook for a large general fertilizer trade is excellent, however, and with no material increase in stocks, the indications are for firm prices ruling.

LIVERPOOL STOCKS.

	Jan. 1.	Dec. 1.
Bacon, boxes	16,700	9,100
Hams, boxes	6,500	3,600
Shoulders, boxes	2,300	900
Cheese, boxes	96,100	123,100
Butter, cwts.	4,500	7,000
Lard, tea.	2,600	2,800
Do., other, tons	2,110	1,530

RETAIL SECTION

LOCAL AND PERSONAL.

The Tacoma Meat Company, of Tacoma, Wash., has been incorporated, with a capital stock of \$10,000.

Richard Queener has opened a market at Bossburg, Wash.

Gus Beck has engaged in the meat business at Eltopia, Wash.

The Harlin Meat Company, of Wenatchee, Wash., has been incorporated with a capital stock of \$40,000, by C. A. Harlin, Jos. Keiner, and others.

Andy Stone has sold his market at St. Anthony, Ida.

H. Hamson has succeeded to the market of Hamson & Clayton at Preston, Ida.

H. H. Grider, of Buffalo, Kas., has sold his shop to Frank Minor.

C. L. Wharton has purchased the market of J. H. Lister at Rose Hill, Ia.

Albert Warner has sustained a fire loss in his meat market at Del Rio, Tex., which was covered by insurance.

Julius Stahle has opened up a shop at White Fish, Mont.

W. F. Shultz has sold his interest in the market at Vancouver, Wash., of Miller & Shultz.

E. Davis, of Fullerton, Cal., has purchased the market of W. French.

F. E. Barrett has purchased the shop of C. M. Coulter at Prescott, Ariz.

Cothran & Fowlkes have consolidated their meat business at Durant, I. T., with that of James & Cannon.

S. C. Hill has purchased the business of Guthrie Bros., at Blue Rapids, Kas.

W. J. Klingla has sold his shop to L. Beauchamp at Tulsa, I. T.

Harter Bros. have purchased the business of A. M. Bovie, at Table Rock, Neb.

W. H. Thomas, of Herington, Kas., has just opened a shop.

The Fort Scott Slaughter Company, of Fort Scott, Kas., has been succeeded by the Fort Scott Slaughter & Packing Company.

Eichorn Bros. have purchased the city meat market at Garden City, Kas., and will continue both the wholesale and retail departments.

J. W. Gregor has opened a shop at Pawnee, Okla.

Chas. L. Mosconi has succeeded to the meat and grocery business in Denver, Colo., of A. Mosconi & Son.

Harvey Noll has opened a shop at Emporia, Kas.

Lee & Goodman, of Rantoul, Kas., have opened a meat business.

Jordan & Cook have purchased the market of C. S. Winchester at Hutchinson, Kas.

Owing to the dissolution of the meat and grocery firm of Holley & Sanderford, at Catoosa, I. T., Mr. Holley will continue alone.

G. T. Allen has been succeeded in the meat business in Holdenville, I. T., by Allen & Dale.

Sanderson & Maxwell, of Broken Arrow, I. T., have sold their business to Page Bros. Spiller & Spiller have succeeded to the shop of Spiller & Hutchins at Adel, Ia.

A. Scott has purchased the market of Austin & Ecton at Carrollton, Mo.

A. Rosenthal has succeeded to the shop of A. Rosenthal & Son at Dallas, Tex.

T. Horsford has succeeded to the business of Horsford & Stump in Topeka, Kas.

Robert Hyslop, of Burr, Neb., has sold his shop to G. Percival.

W. Conway has purchased the business of John P. Garrett at Vesta, Neb.

F. Heinzman has purchased the shop of McAleese & Robinson in Sidney, Neb.

G. W. Isaacs' market at Freeport, Ill., was burned recently. Loss, \$500; fully insured.

W. S. Taylor's shop at Peoria, Ill., was burned last week.

Jacob Liptac, of Westfield, Mass., will soon occupy quarters in the new building of the Slavish Society.

H. C. Sawyer's market in Mt. Morris, Mich., was burned January 4. Loss, \$3,200.

Michigan meat dealers have organized at a meeting held at Flint, as the State Butchers' Protective Association, and are aiming at a state license law and closing shops on Sunday. The following officers were elected: President, John R. Eggeman, of Detroit; first vice-president, John Stengle, of Saginaw; second vice-president, John A. Weckerly, of Flint; secretary, J. G. Windiade, of Flint; recording secretary, Leo

Taube, of Detroit; treasurer, John B. Bierwaldes, of Saginaw.

A. M. Boyle, of Table Rock, Neb., has sold his market to Harter Bros.

LEGAL LIFE OF A RAILROAD TICKET.

A decision as to the life of a railroad ticket, which is attracting considerable attention, has been rendered in favor of the Southern Pacific Company by the Civil Court of Appeals at San Antonio, Tex. The court has decided that a railroad ticket which is not used within a reasonable time after issuance is barred by the statute of limitation. The case arose out of the sale of a ticket by the Southern Pacific on April 29, 1895. The ticket was for a trip from Houston to San Antonio. The man who bought it died without using it. Fifteen years after it was sold. Late in 1899 it was offered to a Southern Pacific conductor. The latter refused to accept it, and the man, refusing to pay his fare, was ejected. There was nothing irregular in the ticket or in its purpose and transfer. In deciding against the man in his damage suit for ejectment, the court holds that "it was never contemplated that the ticket should be held for nearly half of an average lifetime before it was presented for the purpose for which it was purchased. The ticket held by the appellant could not occupy any better position as to the statute of limitation than a promissory note payable on demand."—Railway and Engineering Review.

YOU WANT

To sell some surplus machinery or equipment for which you have no present use

HE WANTS

To get hold of just that thing and is willing to pay cash for it

GET TOGETHER

Via PAGE 48 of THE NATIONAL PROVISIONER

WE will draw you
plan and submit
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**OVERHEAD
TRACKING,**
With All Appliances

R. T. RANDALL & CO.
331-333 North Second Street
PHILADELPHIA.

Refer to our ad. on page 11.

A WORD TO COUNTRY BUTCHERS.

"Hogskins are a drug on the market to-day at 25c. each. They would easily be worth 75c. each if properly taken off, and not so frightfully damaged by the butcher's knife," said a tanner of hogskins recently. "Country butchers are their own worst enemies in regard to taking off hides and skins. As to hogskins, if butchers would take pains not to damage them they could get two or three times as much for them as at present.

"Hogskins make the finest kind of leather for saddles, shoes and other purposes. It is specially strong and durable, besides having a handsome appearance. We made a sample of patent leather out of hogskins some time ago, and had it put into a pair of shoes which I wore for many months, and I never had better satisfaction. We were compelled to drop this line, however, simply and purely because we could not get good hogskins. We could get any quantity of trashy stuff at 25c. each in the Chicago market, but we would rather pay 75c. each and get good skins, which do not contain from 25 to 100 holes, same as many of those shipped in. Hogskins never have grub holes, and are seldom hair slipped. The only damage they receive is from careless and lazy butchers. Many hogskin buyers in the country are picking up skins at 5c. to 10c. each, but would pay twice or three times this amount if the skins were worth it.

"Hogskins come mostly from country butchers. They cut and hack the skins in taking them off in their endeavors to leave as little fat as possible on, as this brings a good price when sold alone. Although the packers kill many thousands of hogs daily, they do not take off the skins. They explain that for their southern trade pork would melt much sooner in a warm country without the skin on. The supply of hogskins is in

the hands of country butchers, and the strongest of efforts should be made by hide buyers to persuade them to be more careful and not send hogskins to the market which look like sieves when held up to the light."

REFRIGERATION FOR MARKETS.

Retail butchers are rapidly coming to the conclusion that the ice man is a costly creditor and that the old-fashioned way of cooling their meat boxes and shops is neither economical nor sanitary. This is especially true since the improvements in mechanical

This Mark

upon a butcher's steel is a mark of quality. Do you want a tool you don't have to take care of? One you can drive into the hardest bone you meet? Look for the name

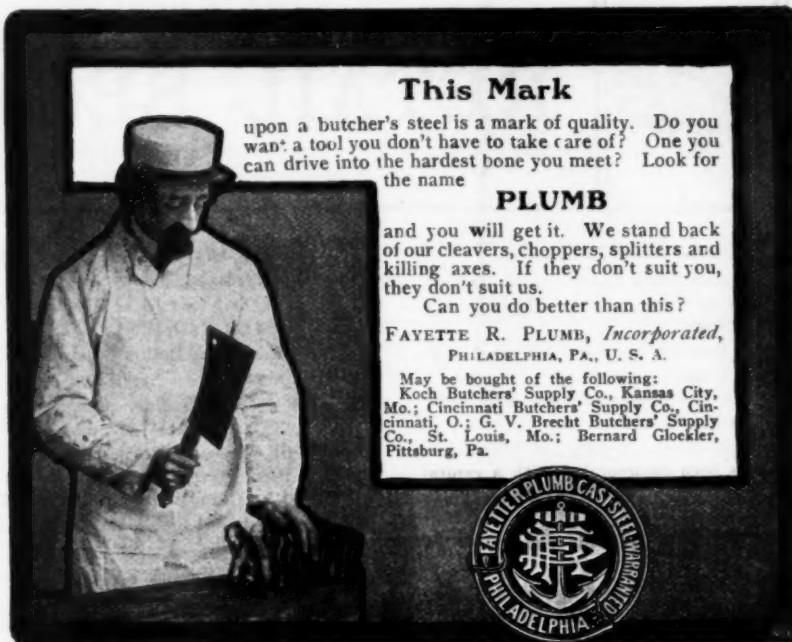
PLUMB

and you will get it. We stand back of our cleavers, choppers, splitters and killing axes. If they don't suit you, they don't suit us.

Can you do better than this?

FAYETTE R. PLUMB, Incorporated,
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May be bought at the following:
Koch Butchers' Supply Co., Kansas City, Mo.; Cincinnati Butchers' Supply Co., Cincinnati, O.; G. V. Brecht Butchers' Supply Co., St. Louis, Mo.; Bernard Gloekler, Pittsburg, Pa.



refrigeration have made it possible for the shop man to have a small cooling plant of his own, where he can not only make his own ice, but also cold air for his boxes and for his salesrooms. Among the manufacturers of these small machines the Brunswick Refrigerating Company has had special success, and its machines are coming into very general use. These machines have been lately described in *The National Provisioner*. The accompanying illustration shows a New York market equipped with a two-ton Brunswick refrigerating plant. It is the shop of August Harnischfeger, at No. 1021 Second avenue, New York City, and is recognized as one of the most modern and sanitary in the metropolis.



MARKET OF AUGUST HARNISCHFEGER, 1021 SECOND AVENUE, NEW YORK CITY.

